

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>				1. CONTRACT ID CODE		PAGE OF PAGES		
2. AMENDMENT/MODIFICATION NO.			3. EFFECTIVE DATE		4. REQUISITION/PURCHASE REQ. NO.		5. PROJECT NO. <i>(If applicable)</i>	
6. ISSUED BY			CODE		7. ADMINISTERED BY <i>(If other than Item 6)</i>		CODE	
8. NAME AND ADDRESS OF CONTRACTOR <i>(No., street, county, State and ZIP Code)</i>					(X)		9A. AMENDMENT OF SOLICITATION NO.	
							9B. DATED <i>(SEE ITEM 11)</i>	
							10A. MODIFICATION OF CONTRACT/ORDER NO.	
							10B. DATED <i>(SEE ITEM 11)</i>	
CODE			FACILITY CODE					

**11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS**

- ☐ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended, ☐ is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:
- (a) By completing items 8 and 15, and returning \_\_\_\_\_ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment your desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA *(If required)*

**13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS.  
IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.**

CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: <i>(Specify authority)</i> THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES <i>(such as changes in paying office, appropriation date, etc.)</i> SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
	D. OTHER <i>(Specify type of modification and authority)</i>

**E. IMPORTANT:** Contractor ☐ is not, ☐ is required to sign this document and return \_\_\_\_\_ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION *(Organized by UCF section headings, including solicitation/contract subject matter where feasible.)*

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER <i>(Type or print)</i>		16A. NAME AND TITLE OF CONTRACTING OFFICER <i>(Type or print)</i>	
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA	16C. DATE SIGNED
<i>(Signature of person authorized to sign)</i>		<i>(Signature of Contracting Officer)</i>	

Item 14. Continued.

**A. CHANGES TO SF 1442, SOLICITATION, OFFER, AND AWARD:**

**NOTE: BID OPENING IS CHANGED FROM "17 MAY 2000, AT 2 P.M. LOCAL TIME" to "07 JUNE 2000, AT 2 P.M. LOCAL TIME."**

Replace the Standard Form 1442, SOLICITATION, OFFER, AND AWARD with the accompanying new Standard Form 1442, SOLICITATION, OFFER, AND AWARD.

**B. CHANGES TO BIDDING SCHEDULE**

Replace the Bidding Schedule, pages 00010-3 through 00010-6, with the accompanying new Bidding Schedule, bearing the notation "ACCOMPANYING AMENDMENT NO. 0001 TO SOLICITATION NO. DACA63-00-B-0013."

**C. CHANGES TO SECTION 00100 INSTRUCTIONS, CONDITIONS, AND NOTICES TO BIDDERS**

SECTION 00100, Delete provision 52.236-27 SITE VISIT (CONSTRUCTION) (FEB 1995) and replace with the following:

"52.236-27 I SITE VISIT (CONSTRUCTION) (ALTERNATE I) (FEB 1995)

(a) The clauses at 52.236-2, Differing Site Conditions, and 52.236-3, Site Investigations and Conditions Affecting the Work, will be included in any contract awarded as a result of this solicitation. Accordingly, offerors or quoters are urged and expected to inspect the site where the work will be performed.

(b) An organized site visit has been scheduled for--

**May 16, 2000 at 9:00 a.m. local time**

(c) Participants will meet at--

**Control Tower Building, Building Number 90049, Fort Hood, Texas**

(End of provision) "

**D. CHANGES TO THE SPECIFICATIONS**

1) Section 01640 - GOVERNMENT FURNISHED PROPERTY - Delete this section and delete from the Table of Contents.

2) New Sections - Add the following accompanying new section, bearing the notation "ACCOMPANYING AMENDMENT NO. 0001 TO SOLICITATION NO. DACA63-00-B-0013:"

<u>Section No.</u>	<u>Title</u>
01520	GOVERNMENT FIELD OFFICE

3) Replacement Sections - Replace the following sections with the accompanying new sections of the same number and title, bearing the notation "ACCOMPANYING AMENDMENT NO. 0001 TO SOLICITATION NO. DACA63-00-B-0013:"

<u>Section No.</u>	<u>Title</u>
01000	CONSTRUCTION SCHEDULE
01320	PROJECT SCHEDULE
01330	SUBMITTAL PROCEDURES
01340	COLOR/FINISH SAMPLE BOARDS

01368	SPECIAL PROJECT PROCEDURES FOR FORT HOOD
01410	ENVIRONMENT PROTECTION
01420	BASIC STORM WATER POLLUTION PREVENTION PLAN (SWPPP)
01451	CONTRACTOR QUALITY CONTROL
13805	ONE-WAY FREQUENCY MODULATION (FM) UTILITY MANAGEMENT & CONTROL SYSTEM (UMCS) DIGITAL CONTROL UNIT
13815	AUTOMATED METER READING SYSTEM

## E. CHANGES TO THE DRAWINGS


Replacement Drawings.- Replace the drawings listed below with the attached new drawings(s) of the same number, bearing the notation "AM #0001":

g02_1.cal	G-2	INDEX OF DRAWINGS VOLUME ONE
c01_1.cal Seq 1	C-1	PROJECT LOCATION & HAUL ROUTE
c02_1.cal Seq 2	C-2	PROJECT LOCATION & HAUL ROUTE MAP II
c03_1.cal Seq 3	C-3	SITE/BUILDING LOCATION MAP & SHEET LAYOUT KEY PLAN
c05_1.cal Seq 5	C-5	TOPO SURVEY SHEET 2
c06a_1.cal Seq 6A	C-6A	SOUTH APRON OVERLAY ON TOPO
c07_1.cal Seq 7	C-7	BLDGS 90049 & 90050 DEMOLITION PLAN (OPTION 1 & 2)
c08_1.cal Seq 8	C-8	AMMO LOAD APRON & TAXIWAY - DEMOLITION/CLEARING PLAN 8
c09_1.cal Seq 9	C-9	AMMO LOAD APRON & TAXIWAY - DEMOLITION/CLEARING PLAN 9
c10_1.cal Seq 10	C-10	AMMO LOAD APRON & TAXIWAY - LAYOUT PLAN 8
c11_1.cal Seq 11	C-11	AMMO LOAD APRON & TAXIWAY - LAYOUT PLAN 9
c12_1.cal Seq 12	C-12	AMMO LOAD APRON & TAXIWAY - GRADING PLAN 8
c14_1.cal Seq 14	C-14	AMMO LOAD APRON & TAXIWAY - PROFILE SHEET 9
c15_1.cal Seq 15	C-15	AMMO LOAD APRON & TAXIWAY - PROFILE SHEET 10
c16_1.cal Seq 16	C-16	AMMO LOAD APRON & TAXIWAY - ROAD CROSS-SECTION SHT. 5
c17_1.cal Seq 17	C-17	AMMO LOAD APRON & TAXIWAY - ROAD CROSS-SECTION SHT. 6
c17a_1.cal Seq 17A	C-17A	AMMO LOAD APRON & TAXIWAY - PROFILE -NEW FENCE ROAD
c17b_1.cal Seq 17B	C-17B	AMMO LOAD APRON & TAXIWAY - PROFILE -NEW FENCE ROAD
c29_1.cal Seq 29	C-29	PAVEMENT SECTIONS SHT. 4
eu01_1.cal Seq 75	EU1	ELECTRICAL KEY PLAN
eu02_1.cal Seq 76	EU2	EXTERIOR LEGEND & SCHEDULES
eu03_1.cal Seq 77	EU3	AIRFIELD LIGHTING CIRCUIT & DUCT RUN SCHEDULES
eu30_1.cal Seq 104	EU30	ELECTRICAL SITE PLAN AREA 1
eu31_1.cal Seq 105	EU31	ELECTRICAL SITE PLAN AREA 2
eu32_1.cal Seq 106	EU32	ELECTRICAL SITE PLAN AREA 3
eu33_1.cal Seq 107	EU33	ELECTRICAL SITE PLAN AREA 4
eu34_1.cal Seq 108	EU34	ELECTRICAL SITE PLAN AREA 5
eu36_1.cal Seq 110	EU36	ELECTRICAL SITE PLAN AREA 7
eu38_1.cal Seq 112	EU38	ELECTRICAL SITE PLAN AREA 9
eu39_1.cal Seq 113	EU39	ELECTRICAL SITE PLAN AREA 10
eu40_1.cal Seq 114	EU40	ELECTRICAL SITE PLAN AREA 11
eu41_1.cal Seq 115	EU41	ELECTRICAL SITE PLAN AREA 12
eu42_1.cal Seq 116	EU42	ELECTRICAL SITE PLAN AREA 13
eu43_1.cal Seq 117	EU43	ELECTRICAL SITE PLAN AREA 14
eu45_1.cal Seq 119	EU45	ELECTRICAL SITE PLAN AREA 16
eu46_1.cal Seq 120	EU46	ELECTRICAL SITE PLAN AREA 17
eu47_1.cal Seq 121	EU47	ELECTRICAL SITE PLAN AREA 18
eu48_1.cal Seq 122	EU48	ELECTRICAL SITE PLAN AREA 19
eu49_1.cal Seq 123	EU49	ELECTRICAL SITE PLAN AREA 20
eu50_1.cal Seq 124	EU50	ELECTRICAL SITE PLAN AREA 21
eu51_1.cal Seq 125	EU51	ELECTRICAL SITE PLAN AREA 22

eu52_1.cal Seq 126	EU52	ELECTRICAL SITE PLAN AREA 23
eu53_1.cal Seq 127	EU53	ELECTRICAL SITE PLAN AREA 24
eu56_1.cal Seq 130	EU56	ELECTRICAL SITE PLAN AREA 27
eu57_1.cal Seq 131	EU57	ELECTRICAL SITE PLAN AREA 28
eu59_1.cal Seq 133	EU59	ELECTRICAL SITE PLAN AREA 30
eu60_1.cal Seq 134	EU60	ELECTRICAL SITE PLAN AREA 31
eu62_1.cal Seq 136	EU62	NORTH AND SOUTH APPROACH LIGHTING PROFILES
eu63_1.cal Seq 137	EU63	EXTERIOR LIGHTING DETAILS 1
eu64_1.cal Seq 138	EU64	EXTERIOR LIGHTING DETAILS 2
eu65_1.cal Seq 139	EU65	DUCT DETAILS
eu66_1.cal Seq 140	EU66	MANHOLE, HANDHOLE AND TRANSFORMER DETAILS
eu67_1.cal Seq 141	EU67	RUNWAY & TAXIWAY LIGHTING DETAILS
eu69_1.cal Seq 143	EU69	GUIDANCE SIGN DETAILS
eu70_1.cal Seq 144	EU70	THRESHOLD & APPROACH LIGHTING DETAILS 1
eu71_1.cal Seq 145	EU71	APPROACH LIGHTING DETAILS 2
eu73_1.cal Seq 147	EU73	APPROACH LIGHTING DETAILS 4
eu74_1.cal Seq 148	EU74	APPROACH LIGHTING DETAILS 5
eu75_1.cal Seq 149	EU75	SEQUENCE FLASHER STATION DETAILS
eu77_1.cal Seq 151	EU77	RUNWAY & APPROACH LIGHTING WIRING DIAGRAM 1
eu78_1.cal Seq 152	EU78	RUNWAY & APPROACH LIGHTING WIRING DIAGRAM 2
eu81_1.cal Seq 155	EU81	CATHODIC PROTECTION DETAILS
g03_1.cal	G-3	INDEX OF DRAWINGS VOLUME TWO
ca01_1.cal Seq 160	CA-1	SOUTH APRON - DEMOLITION PLAN 3
ca02_1.cal Seq 161	CA-2	SOUTH APRON - CLEARING PLAN 3
ca03_1.cal Seq 162	CA-3	SOUTH APRON - DEMOLITION PLAN 4
ca04_1.cal Seq 163	CA-4	SOUTH APRON - CLEARING PLAN 4
ca05_1.cal Seq 164	CA-5	SOUTH APRON - DEMOLITION PLAN 5
ca06_1.cal Seq 165	CA-6	SOUTH APRON - CLEARING PLAN 5
ca07_1.cal Seq 166	CA-7	SOUTH APRON - DEMOLITION PLAN 6
ca09_1.cal Seq 168	CA-9	SOUTH APRON - DEMOLITION PLAN 7
ca16_1.cal Seq 176	CA-16	SOUTH APRON - LAYOUT PLAN 4
ca16A_1.cal Seq 176A	CA-16A	SOUTH APRON - ENLARGED SCALE AREA LAYOUT & GRADING
aa01_1.cal Seq 222	AA-01	LIFE SAFETY PLAN / DETAILS
aa02_1.cal Seq 223	AA-02	REFERENCE FLOOR PLANS / ELEVATIONS
aa04_1.cal Seq 225	AA-04	FLOOR PLAN - SUPPORT AREA
aa05_1.cal Seq 226	AA-05	FLOOR PLAN - TROOP AREA "A"
aa06_1.cal Seq 227	AA-06	FLOOR PLAN - ADMIN./CAB.
aa11_1.cal Seq 232	AA-11	BUILDING SECTIONS
aa12_1.cal Seq 233	AA-12	BUILDING SECTIONS
aa13_1.cal Seq 234	AA-13	BUILDING SECTIONS
aa14_1.cal Seq 235	AA-14	BUILDING SECTIONS
aa15_1.cal Seq 236	AA-15	BUILDING SECTIONS
aa16_1.cal Seq 237	AA-16	BUILDING SECTIONS
aa17_1.cal Seq 238	AA-17	WALL SECTIONS
aa18_1.cal Seq 239	AA-18	WALL SECTIONS
aa19_1.cal Seq 240	AA-19	WALL SECTIONS
aa20_1.cal Seq 241	AA-20	WALL SECTIONS
aa21_1.cal Seq 242	AA-21	WALL SECTIONS
aa22_1.cal Seq 243	AA-22	INTERIOR ELEVATIONS
aa23_1.cal Seq 244	AA-23	INTERIOR ELEVATIONS
aa24_1.cal Seq 245	AA-24	ENLARGED PLANS & INT. ELEVS.
aa25_1.cal Seq 246	AA-25	ENLARGED PLANS & INT. ELEVS.
aa26_1.cal Seq 247	AA-26	ENLARGED PLANS & INT. ELEVS.
aa27_1.cal Seq 248	AA-27	ENLARGED PLANS & INT.ELEVS.

aa28\_1.cal Seq 249 AA-28 ENLARGED PLANS & INT.ELEVS.  
 sa07\_1.cal Seq 287 SA-7 ROOF PLAN - TROOP AREA "B"  
 sa08\_1.cal Seq 288 SA-8 ROOF PLAN - SUPPORT AREA  
 sa09\_1.cal Seq 289 SA-9 ROOF PLAN- TROOP AREA "A" AND ADMINISTRATION AREA  
 sa10\_1.cal Seq 290 SA-10 OBSERVATION CAB FRAMING - 1  
 sa11\_1.cal Seq 291 SA-11 OBSERVATION CAB FRAMING - 2  
 sa12\_1.cal Seq 292 SA-12 ROOF SECTIONS 1  
 sa14\_1.cal Seq 294 SA-14 ROOF SECTIONS 3  
 sa15\_1.cal Seq 295 SA-15 ROOF SECTIONS 4  
 sa19\_1.cal Seq 299 SA-19 ROOF SECTIONS 8  
 ma01\_1.cal Seq 300 MA.1 MECHANICAL LEGENDS AND SCHEDULES  
 ma03\_1.cal Seq 302 MA.3 HVAC FLOOR PLAN - TROOP AREA "B"  
 ma04\_1.cal Seq 303 MA.4 HVAC FLOOR PLAN - SUPPORT AREA  
 ma05\_1.cal Seq 304 MA.5 HVAC FLOOR PLAN - TROOP AREA "A"  
 ma06\_1.cal Seq 305 MA.6 HVAC FLOOR PLAN - ADMIN. / CAB  
 ma07\_1.cal Seq 306 MA.7 ENLARGED HVAC FLOOR PLAN - MECHANICAL ROOMS A109 & A203  
 ma08\_1.cal Seq 307 MA.8 ENLARGED HVAC FLOOR PLAN - MECHANICAL ROOM A144  
 ma09\_1.cal Seq 308 MA.9 HOT WATER BOILERS AND CHILLERS PIPING SCHEMATICS  
 ma10\_1.cal Seq 309 MA.10 HVAC DETAILS  
 ma16\_1.cal Seq 315 MA.16 AIR HANDLING UNITS AHU - 1 & 2 CONTROL DIAGRAMS I  
 ma18\_1.cal Seq 317 MA.18 AIR HANDLING UNITS AHU - 3 & 4 CONTROL DIAGRAMS I  
 ma26\_1.cal Seq 325 MA.26 ENLARGED PLUMBING FLOOR PLANS  
 mb06\_1.cal Seq 395 MB.6 PLUMBING DETAILS  
 cc01\_1.cal Seq 407 CC-1 FIRE STATION - DEMOLITION PLAN 2  
 ac02\_1.cal Seq 419 AC-2 GENERAL FLOOR PLAN  
 ac03\_1.cal Seq 420 AC-3 PARTIAL FLOOR PLAN (A)  
 ac04\_1.cal Seq 421 AC-4 PARTIAL FLOOR PLAN (B)  
 ac11\_1.cal Seq 428 AC-11 REFLECTED CLG.-MASTER PLAN  
 ac13\_1.cal Seq 430 AC-13 PARTIAL REFLECTED CLG. PLAN - SECTION "B"  
 ac28\_1.cal Seq 445 AC-28 MISCELLANEOUS DETAILS  
 ac29\_1.cal Seq 446 AC-29 MISCELLANEOUS DETAILS  
 mc04\_1.cal Seq 466 MC.4 HVAC FLOOR PLAN - AREA "B"  
 mc06\_1.cal Seq 468 MC.6 HOT WATER BOILER AND REFRIGERANT PIPING SCHEMATICS  
 mc07\_1.cal Seq 469 MC.7 HVAC DETAILS  
 mc14\_1.cal Seq 476 MC.14 PLUMBING FLOOR PLAN - AREA "B"  
 mc15\_1.cal Seq 477 MC.15 PLUMBING PLANS TOILET AND MECHANICAL ROOMS  
 ec05\_1.cal Seq 487 EC5 FIRE STATION LIGHTING PLAN - AREA B  
 ec07\_1.cal Seq 489 EC7 FIRE STATION POWER PLAN - AREA B  
 ec09\_1.cal Seq 491 EC9 FIRE STATION COMMO/FA PLAN - AREA B  
 md01\_1.cal Seq 560 MD.1 MECHANICAL LEGENDS AND SCHEDULES  
 md02\_1.cal Seq 561 MD.2 HVAC FLOOR PLANS  
 md03\_1.cal Seq 562 MD.3 HVAC DETAILS AND CONTROL DIAGRAM

END OF AMENDMENT

<b>SOLICITATION, OFFER, AND AWARD</b> <i>(Construction, Alteration, or Repair)</i>	1. SOLICITATION NUMBER	2. TYPE OF SOLICITATION <input type="checkbox"/> SEALED BID (IFB) <input type="checkbox"/> NEGOTIATED (RFP)	3. DATE ISSUED	PAGE OF PAGES
	<b>IMPORTANT - The "offer" section on the reverse must be fully completed by the offeror.</b>			
4. CONTRACT NUMBER	5. REQUISITION/PURCHASE REQUEST NUMBER	6. PROJECT NUMBER		
7. ISSUED BY	CODE	8. ADDRESS OFFER TO		
9. FOR INFORMATION CALL 		A. NAME	B. TELEPHONE NUMBER <i>(Include area code) (NO COLLECT CALLS)</i>	

**SOLICITATION**

**NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid" and "bidder".**

10. THE GOVERNMENT REQUIRES PERFORMANCE OF THE WORK DESCRIBED IN THESE DOCUMENTS *(Title, identifying number, date):*

11. The Contractor shall begin performance within \_\_\_\_\_ calendar days and complete it within \_\_\_\_\_ calendar days after receiving  
☐ award, ☐ notice to proceed. This performance period is ☐ mandatory, ☐ negotiable. *(See \_\_\_\_\_.)*

12A. THE CONTRACTOR MUST FURNISH ANY REQUIRED PERFORMANCE PAYMENT BONDS?

*(If "YES," indicate within how many calendar days after award in Item 12B.)*

☐ YES ☐ NO

12B. CALENDAR DAYS

13. ADDITIONAL SOLICITATION REQUIREMENTS:

A. Sealed offers in original and \_\_\_\_\_ copies to perform the work required are due at the place specified in Item 8 by \_\_\_\_\_ *(hour)*  
 local time \_\_\_\_\_ *(date)*. If this is a sealed bid solicitation, offers will be publicly opened at that time. Sealed envelopes  
 containing offers shall be marked to show the offeror's name and address, the solicitation number, and the date and time offers are due.

B. An offer guarantee ☐ is, ☐ is not required.

C. All offers are subject to the (1) work requirements, and (2) other provisions and clauses incorporated in the solicitation in full text or by reference.

D. Offers providing less than \_\_\_\_\_ calendar days for Government acceptance after the date offers are due will not be considered and will  
 be rejected.

**OFFER (Must be fully completed by offeror)**

14. NAME AND ADDRESS OF OFFEROR (Include ZIP Code)

15. TELEPHONE NUMBER (Include area code)

16. REMITTANCE ADDRESS (Include only if different than Item 14)

CODE

FACILITY CODE

17. The offeror agrees to perform the work required at the prices specified below in strict accordance with the terms of this solicitation, if this offer is accepted by the Government in writing within \_\_\_\_\_ calendar days after the date offers are due. (Insert any number equal or greater than the minimum requirement stated in 13D. Failure to insert any number means the offeror accepts the minimum in Item 13D.)

AMOUNTS 

18. The offeror agrees to furnish any required performance and payment bonds.

**19. ACKNOWLEDGEMENT OF AMENDMENTS**

(The offeror acknowledges receipt of amendments to the solicitation - give number and date of each)

AMENDMENT NO.

DATE

20A. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER (Type or print)

20B. SIGNATURE

20C. OFFER DATE

**AWARD (To be completed by Government)**

21. ITEMS ACCEPTED

22. AMOUNT

23. ACCOUNTING AND APPROPRIATION DATA

24. SUBMIT INVOICES TO ADDRESS SHOWN IN  
(4 copies unless otherwise specified)

ITEM

25. OTHER THAN FULL AND OPEN COMPETITION PURSUANT TO

☐ 10 U.S.C. 2304(c) ( )☐ 41 U.S.C. 253(c) ( )

26. ADMINISTERED BY

CODE

27. PAYMENT WILL BE MADE BY

**CONTRACTING OFFICER WILL COMPLETE ITEM 28 OR 29 AS APPLICABLE**☐ 28. NEGOTIATED AGREEMENT (Contractor is required to sign this

document and return \_\_\_\_\_ copies to the issuing office.) Contractor agrees to furnish and deliver all items or perform all work requirements identified on this form and any continuation sheets for the consideration stated in this contract. The rights and obligations of the parties to this contract shall be governed by (a) this contract award, (b) the solicitation, and (c) the clauses, representations, certifications, and specifications incorporated by reference in or attached to this contract.

☐ 29. AWARD. (Contractor is not required to sign this document.) Your offer on this solicitation is hereby accepted as to the items listed. This award consummates the contract, which consists of (a) the Government solicitation and your offer, and (b) this contract award. No further contractual document is necessary.

30A. NAME AND TITLE OF CONTRACTOR OR PERSON AUTHORIZED TO SIGN  
(Type or print)

31A. NAME OF CONTRACTING OFFICER (Type or print)

30B. SIGNATURE

30C. DATE

31B. UNITED STATES OF AMERICA

31C. AWARD DATE

BY

Solicitation No. DACA63-00-B-0013

BIDDING SCHEDULE  
(To be attached to SF 1442)

Item No.	Description	Estimated Quantity	Unit	Unit Cost	Estimated Amount
BASE BID: All work required by the plans and specifications for the construction of the Fixed Wing Airfield Park <u>excluding</u> all Options.					
0001	Air Passenger Terminal; complete (Including all utilities to the 1524mm (five foot) line exclusive of all work listed separately)	Job	Sum	***	\$_____
0002	Fire Station; complete (Including all utilities to the 1524mm (five foot) line exclusive of all work listed separately)	Job	Sum	***	\$_____
0003	Warehouse; complete (Including all utilities to the 1524mm (five foot) line exclusive of all work listed separately)	Job	Sum	***	\$_____
0004	Pallet Shed; complete (Including all utilities to the 1524mm (five foot) line exclusive of all work listed separately)	Job	Sum	***	\$_____
0005	Scale House; complete (Including all utilities to the 1524mm (five foot) line exclusive of all work listed separately)	Job	Sum	***	\$_____
0006	Fuel Shut-off House; complete (Including all utilities to the 1524mm (five foot) line exclusive of all work listed separately)	Job	Sum	***	\$_____
0007	Air Craft Control Tower; complete (Including all utilities to the 1524mm (five foot) line exclusive of all work listed separately)	Job	Sum	***	\$_____
0008	PCB Abatement	Job	Sum	***	\$_____
0009	Mercury Abatement	Job	Sum	***	\$_____
0010	CDC Abatement	Job	Sum	***	\$_____

## BIDDING SCHEDULE (Cont)

Item No.	Description	Estimated Quantity	Unit	Unit Cost	Estimated Amount
0011	Drilled Piers				
0011AA	18-In Drilled Piers	1889	M	\$_____	\$_____
0011AB	24-In Drilled Piers	241	M	\$_____	\$_____
0011AC	30-In Drilled Piers	65	M	\$_____	\$_____
0011AD	36-In Drilled Piers	1508	M	\$_____	\$_____
0012	All Exterior Work outside the building's five foot line (Including of all utilities, earthwork, paving sidewalk, curb and gutter, demolition, turfing and all other work not listed separately	Job	Sum	***	\$_____
0013	Final Record Drawings	Job	Sum	***	\$100,000.00

TOTAL BASE BID \$\_\_\_\_\_

OPTION NO. 1: All work required by the plans and specifications for the Demolition of the Fire Station.

0014	Hazardous Waste Abatement	Job	Sum	***	\$_____
0015	Building and All Other Demolition	Job	Sum	***	\$_____

TOTAL OPTION NO 1. \$\_\_\_\_\_

OPTION NO. 2: All work required by the plans and specifications for the Demolition of the Control Tower.

0016	Hazardous Waste Abatement	Job	Sum	***	\$_____
0017	Building and All Other Demolition	Job	Sum	***	\$_____

TOTAL OPTION NO 2. \$\_\_\_\_\_

## BIDDING SCHEDULE (Cont)

Item No.	Description	Estimated Quantity	Unit	Unit Cost	Estimated Amount
OPTION NO. 3: All work required by the plans and specifications for the construction of the Runway Approach Lighting and the Lighting Vault					
0018	Runway Approach Lighting	Job	Sum	***	\$_____
0019	Lighting Vault; Complete including all utilities excluding work listed separately	Job	Sum	***	\$_____
0020	Drilled Piers				
0020AA	457mm (18-In) Drilled Piers	36	M	\$_____	\$_____
0020AB	610mm (24-In) Drilled Pier	18	M	\$_____	\$_____
TOTAL OPTION NO. 3					\$_____
TOTAL BASE BID PLUS OPTIONS 1 THRU 3					\$_____

## NOTES:

- 1 (a) For the purpose of initial evaluation of bids, the following will be utilized in resolving arithmetic discrepancies found on the face of the bidding schedule as submitted by bidders:
  - (1) Obviously misplaced decimal points will be corrected;
  - (2) In case of discrepancy between unit price and extended price, the unit price will govern;
  - (3) Apparent errors in extension of unit prices will be corrected; and
  - (4) Apparent errors in addition of lump-sum and extended prices will be corrected.
- (b) For the purposes of bid evaluation, the Government will proceed on the assumption that the bidder intends his bid to be evaluated on the basis of the unit prices, extensions, and totals arrived at by resolution of arithmetic discrepancies as provided above and the bid will be so reflected on the abstract of bids. (EFARS 14.406-2)
2. If a modification to a bid based on unit prices is submitted, which provides for a lump sum adjustment to the total estimated cost, the application of the lump sum adjustment to each unit price in the bid schedule must be stated. If it is not stated, the bidder agrees that the lump sum adjustment shall be applied on a pro rata basis to every unit price in the bid schedule.

NOTES: (cont)

3. Bidders must bid on all items.
4. Costs attributable to Division 01 - General Requirements are assumed to be prorated among bid items listed.
5. Responders are advised that this requirement may be delayed, canceled or revised at any time during the solicitation, selection, evaluation, negotiation and/or final award process based on decisions related to DOD changes in force structure and disposition of the Armed Services.
6. For the purpose of this solicitation, the word "item" shall be considered to mean "schedule" as used in Provision 52,214-0019, CONTRACT AWARD--SEALED BIDDING--CONSTRUCTION, in Section 00100 INSTRUCTIONS, CONDITIONS, AND NOTICES TO BIDDERS, excluding additives, deductives or options

7 EVALUATION OF OPTIONS (JUL 1990) (FAR 52.217-5)

Except when it is determined in accordance with FAR 17.206(b) not to be in the Government's best interests, the Government will evaluate offers for award purposes by adding the total price for all options to the total price for the basic requirement. Evaluation of options will not obligate the Government to exercise the option(s).

8 OPTION FOR INCREASED QUANTITY - SEPARATELY PRICED LINE ITEM (MAR 1998)  
(FAR 52.217-7)

The Government may require the completion of the numbered line item, identified in the Bidding Schedule as an option item, in the quantity and at the price stated in the Bidding Schedule. The Contracting Officer may exercise the option by written notice to the Contractor within the period specified in the Bidding Schedule. Completion of added items shall continue at the same schedule as the Base Bid unless otherwise noted in the SPECIAL CONTRACT REQUIREMENTS, paragraph 1 entitled COMMENCEMENT, PROSECUTION AND COMPLETION OF WORK.

9. The Government reserves the right to exercise the option(s) either singularly or in any combination for up to 90 calendar days after award of the Base Bid without an increase in the Offeror's Bid Price.

10. Abbreviations

For the purposes of this solicitation, the units of measure are represented as follows:

- M (Meters)
- M2 (Square Meters)
- M3 (Cubic Meters)
- mm (Millimeter)

SECTION 01000

CONSTRUCTION SCHEDULE  
05/1998

AMENDMENT #0001

PART 1 GENERAL

1.1 SCHEDULE

Commence, prosecute, and complete the work under this contract in accordance with the following schedule and Section 00800 SPECIAL CONTRACT REQUIREMENT clauses COMMENCEMENT, PROSECUTION AND COMPLETION OF WORK and LIQUIDATED DAMAGES:

Item of Work	Commencement of Work (calendar days)	Completion of Work (calendar days)	Liquidated Damages per calendar day _
(1) Fire Station and Associated Site Utilities & Site Work	Within 10 days after receipt of Notice to Proceed	375 days	\$ 500.00
(2) Abatement and Demolition of of Bldg 90050 and Associated Utility Demo.	60 days After Completion of Item of Work (1)	60 days	\$ 300.00
(3) Air Traffic Control Tower & Lighting Vault and Associated Utilities and Site Work	Within 10 days After N.T.P.	500 days	\$1,000.00
(4) Abatement and Demolition of Building 90049 and Associated Utilities & Site Demo.	60 days After Completion of Item of Work (3)	60 days	\$ 500.00
(5) Ammo Load Apron and Taxiway and Associated Utilities	200 days After N.T.P.	300 days	\$ 500.00
(6) Passenger Air Terminal Building and Associated Utilities & Site Work	Within 10 days After N.T.P.	540 days	\$ 750.00

(7) All Fuel Lines and Associated Controls, Hydrants, etc., and Aircraft Parking West of Demarcation Line	Within 10 days After N.T.P.	300 days	\$ 500.00
(8) All Work Not Separately Listed	Within 10 days after N.T.P.	540 days	\$ 200.00
(9) Establishment of Turf	*	*	---
(10) O&M Manuals	**	**	\$ 20.00
(11) Final As-Built Drawings	***	540 days	\$ 25.00

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(12) Fire Station Work Restriction Area	10 days after approval by Airfield	Within 60 days of start within 375 days of NTP	\$ 100.00
(13) Aircraft Parking Restriction Area	10 days after approval by Airfield	Within 70 days of start within 300 days of NTP	\$ 100.00
(14) Ammo Load Apron Restriction Area	10 days after approval by Airfield	Within 90 days of start within 500 days of NTP	\$ 100.00

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**\*Establishment of Turf**

Planting and maintenance for turfing shall be in accordance with Section 02933 ESTABLISHMENT OF TURF. No payment will be made for establishment of turf until all requirements of the section are adequately performed and accepted, as determined by the Contracting Officer.

\*\*O&M Manuals for each building shall be turned-in to the Government, 30 days before completion of a Item of Work.

\*\*\*See SECTION 01770 - CONTRACT CLOSEOUT, paragraph titled RECORD DRAWINGS.

**1.1.1 Testing of Heating and Air-Conditioning Systems**

The times stated for completion of this project includes all required testing specified in appropriate specification sections of heating, air conditioning and ventilation systems including HVAC Commissioning. Exception: boiler combustion efficiency test, boiler full load tests, cooling tower performance tests, and refrigeration equipment full load tests, when specified in the applicable specifications, shall be preformed in the appropriate heating/cooling season as determined by the Contracting Officer.

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1.2 TIME EXTENSIONS FOR UNUSUALLY SEVERE WEATHER (OCT 1989)  
(ER 415-1-15) (52.0001-4038 1/96)

a. This provision specifies the procedure for determination of time extensions for unusually severe weather in accordance with the contract clause entitled "Default: (Fixed Price Construction)." In order for the Contracting Officer to award a time extension under this clause, the following conditions must be satisfied:

(1) The weather experienced at the project site during the contract period must be found to be unusually severe, that is, more severe than the adverse weather anticipated for the project location during any given month.

(2) The unusually severe weather must actually cause a delay to the completion of the project. The delay must be beyond the control and without the fault or negligence of the contractor.

b. The following schedule of monthly anticipated adverse weather delays due to precipitation and temperature is based on National Oceanic and Atmospheric Administration (NOAA) or similar data for the project location and will constitute the base line for monthly weather time evaluations. The contractor's progress schedule must reflect these anticipated adverse weather delays in all weather dependent activities. Wind is not considered in the Monthly Anticipated Adverse Weather Calendar Day Schedule.

MONTHLY ANTICIPATED ADVERSE WEATHER DELAY  
WORK DAYS BASED ON (5) DAY WORK WEEK

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
4	4	4	4	6	4	3	3	4	4	3	4

c. Upon acknowledgment of the Notice to Proceed (NTP) and continuing throughout the contract, the contractor will record on the daily CQC report, the occurrence of adverse weather and resultant impact to normally scheduled work. Actual adverse weather delay days must prevent work on critical activities for 50 percent or more of the contractor's scheduled work day.

The number of actual adverse weather delay days shall include days impacted by actual adverse weather (even if adverse weather occurred in previous month), be calculated chronologically from the first to the last day of each month, and be recorded as full days. If the number of actual adverse weather delay days exceeds the number of days anticipated in paragraph "b", above, the Contracting Officer will convert any qualifying delays to calendar days, giving full consideration for equivalent fair weather work days, and issue a modification in accordance with the contract clause entitled "Default (Fixed Price Construction)."

1.3 CONSTRUCTION PHASING

The Contractor will be working adjacent to and on active aircraft taxiways,

runways, and supoport areas while Robert Gray Army Airfield is in operation of Military and Civilian aircraft. **RGAAF is critical to the Army's mission and national security. The contractor shall take care not to interfere or detrimentally affect the operation of the air field runway or other facilities. Airfield operations must be maintained at all time. Airfield operations can not tolerate typical construction dust and flying debris. The contractor must include in his Demolition Plan and Environmental Protection Plan procedures with intensive control measures to minimize dust and ensure that flying debris is eliminated. The contractor shall anticipate short periodic delays as well as extended periods as noted below to accommodate airfield operations.**

The Contractor shall comply with all airfield safety and operational requirements. While working adjacent to active taxiways and runways, the Contractor's foreman in charge of the workers shall have a radio and be in constant communications with the airfield tower. The Contractor-supplied hand-held radios shall be equal to model #M-RK I, 900MHz Ericsson EDACS Portable Radio and shall be on Frequency (to be programmed by DOIM). The Contractor shall provide one additional operational radio for communications with the control tower for use by the Government's Quality Assurance Representative. The Contractor shall pay \$32.00 per month per radio for Airtime for the length of the Contract or a total of \$ 2000 for total airtime to the Fort Hood DOIM. The radios will be turned-in to the Government at the end of the Contract.

All workers shall wear reflectorized bright red/orange high-visibility safety vests when working adjacent to taxiways and runways.

A. Construction of aircraft parking, vehicle roads, and the ammo load apron within 46 meters (150 feet) of the centerline of the existing west (running N-S) taxiway is restricted to the following phasing plan.

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**The contractor shall allow a minimum of 30 days prior notice for approval/disapproval of his proposed schedule to work in the various Work Restricted Areas (WRA). All aircraft will be diverted during the contractor's work in the WRA. Therefore, the duration of work in these areas must be minimized. The contractor must ensure that the taxiway is safely accessible for the user's traffic throughout work in the WRA's. In order to allow for deployment of ammunitions, the contractor should anticipate being required to stop work and evacuate the WRA's for up to 3 each 48 hour-periods during scheduled work in the WRA's.**

(1) Construction in this area may be halted for periods of 15 minute intervals when aircraft are using this taxiway. This should happen no more than 10 times a week on average.

(2) The Contractor shall erect a temporary 1 meter (3 feet) height chain-link fence along the 46 meters (150-foot) work restriction line at the new fire station (Sheets CC-1 and CC-2), at the south parking apron (Sheets CA-1, CA-5, CA-9, CA-15, CA-17, and CA-19), at the ammo load apron (Sheets C-8 and C-10). This fence shall restrict personnel and equipment from entering the work restriction area. The "work restriction areas" are areas between the centerline of the west Taxiway to 46 meters (150 feet) to

the west of the centerline. The fence shall be maintained from Contractor mobilization at the site until final inspection of the site.

(3) The Contractor shall schedule his construction within the work restriction area at the Fire Station so that once he starts work in the Fire Station Area, he can complete the work within 60 days. Additionally, this work shall be completed 375 days after the Notice to Proceed. Liquidated Damages for this Item of Work shall be \$100.00 per calendar day.

(4) The Contractor shall schedule his construction within the work restriction area at the Aircraft Parking Area so that once he starts work in the Aircraft Parking Area, he can complete the work within 70 days. Additionally, this work shall be completed 300 days after the Notice to Proceed. Liquidated Damages for this Item of Work shall be \$100.00 per calendar day.

(5) The Contractor shall schedule his construction within the work restriction area at the Ammo Load Apron Area so that once he starts work in the Ammo Load Apron Area, he can complete the work within 90 days. Additionally, this work shall be completed 500 days after the Notice to Proceed. Liquidated Damages for this Item of Work shall be \$100.00 per calendar day.

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**(6) Work in the Aircraft parking Restricted Area and work in the Ammo Restricted Area cannot be performed at the same time. Each must be scheduled to allow the airfield full use the of the opposite restricted area.**

**B. Airfield Approach Lighting:**

(1) The existing approach lighting shall not be removed or made inoperative until the new approach lighting is operational. See Sheet EW4.

(2) The erection of the metal centerline light bars and flashers shall not commence until all foundations, electrical handholes, conducts, ducts, conductors, etc., are completed and ready for final erection of light standards. Final erection of FAA type metal light structures shall be completed at one end of the runway before work on the other end shall start. The Contractor shall complete the installation and testing of the FAA approved light structures within 10 days after starting at either end.

(3) Construction of the threshold light bar at either end of the runway shall not begin until all materials for the work are approved and on-site. The Contractor shall inventory all the equipment and report the results of the inventory to the Q.A. The Contractor shall notify the Government 30 days before his scheduled start of this work. The Government shall designate a temporary runway threshold location and the Contractor shall provide all temporary lights, conductors, electrical power, structures, etc. for the temporary threshold light bar. The Contractor shall maintain the temporary threshold light bar from the time of operations (5 days before start of new runway threshold light bar) until the new threshold light bar is operational. The Contractor shall remove the temporary threshold light bar

and restore the runway to it's original condition. the Contractor shall repeat this operation at each end of the runway during separate construction times. Construction of the threshold light bar will be limited to 30 days at each end of the runway.

C. Taxiway and Runway Lighting and Signage.

1. Existing taxiway, runway and airfield signage lighting shall not be removed or made inoperative until the new lighting is operational or a transfer from the old lighting to the new is ready for a 1-hour transfer.

2. Contractor's construction and operations near the taxiways and runways will be restricted and limited to times when the airfield is not conducting aircraft landings, take-offs or operations on taxiways. The Contractor shall anticipate construction delays lasting 15 minutes or more several times a day.

See Electrical Sheets for detail of temporary threshold light bar and additional requirements.

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**D. Fire Alarm and Fire Sprinkler Systems.**

**The Contractor shall submit the fire alarm and fire sprinkler transmittals such that they are approved within 180 days after the notice to proceed. The fire alarm and fire sprinkler systems shall be tested per specification and completely operational 30 days before the Final Inspection. Only 50% payment for all activities related to the fire alarm and fire sprinkler systems will be allowed prior to all contract requirements to include the final acceptance testing is successfully completed and the system is approved and accepted by the Contracting Officer.**

1.4 WORK RESTRICTIONS

1.4.1 Working Hours

The normal duty working shift shall be Monday through Friday, 8:00 a.m. - 4:30 p.m.

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1.5 UTILITIES

1.5.1 Payment for Utility Services

**Water and electricity are available from Government-owned and operated systems and will be charged to the Contractor at rates as provided in Contract Clause 52.236.14 AVAILABILITY AND USE OF UTILITY SERVICES.**

1.5.2 Outages

The Contractor shall coordinate all requests for utility outages with the Contracting Officer in writing 21 days prior to date

of requested outage:

- a. Water, and sewer outages shall be held to a maximum duration of 2
- b. Approved electrical outages shall have a maximum duration of 1-hour. No aerial electrical outage shall be allowed on circuits indicated to be hot tapped on the drawings. The Contractor shall perform work on this circuit hot and meet all safety requirements for this type work.
- c. No gas utility outages are permitted. Hot tap new gas line to existing.
- d. All utility outages shall be scheduled only on Saturdays, Sundays, or holidays unless specific approval is otherwise received.

#### 1.6 STREET CLOSINGS

The Contractor shall coordinate all requests for street closings with the Contracting Officer in writing 21 days prior to date of requested outage:

- a. One lane traffic shall be maintained at all times, at least two flagmen will be on duty at assist traffic in the open lane, when other lanes are closed due to the Contractor's operations. Flagmen will meet the requirements of Item 7.7 of the Texas State Department of Highways and Public Transportation Standard Specifications for Construction of Highways, Streets, and Bridges, 1982 Ed.
- b. The final street repair shall be completed within 14 days after the start of any street crossing. Any part of the street returned to service prior to final repair shall be maintained smooth with hot-mix cold-lay surface course.
- c. Open cuts across paved roads and streets for utility crossings will not be allowed. Utility crossings will be accomplished by boring or jacking procedures only.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

-- End of Section --

SECTION 01320

PROJECT SCHEDULE  
**Amend #0001**

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of the specification to the extent referenced. The publications are referenced in the text by basic designation only.

ENGINEERING REGULATIONS (ER)

ER 1-1-11 (1995) Progress, Schedules, and Network  
Analysis Systems

1.2 SUBMITTALS

Government approval is required for submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-07 Schedules

Preliminary Project Schedule; FIO.

Initial Project Schedule; GA.

Periodic Schedule Updates; GA.

Three copies of the schedules, in hard copy and on data disk(s), showing codes, values, categories, numbers, items, etc., as required.

SD-08 Statements

Qualifications Of Scheduler; FIO.

Documentation showing qualifications of personnel preparing schedule reports.

SD-09 Reports

Narrative Report; FIO.

Schedule Reports; FIO.

Three copies of the reports, in hard copy and on data disk(s), showing numbers, descriptions, dates, float, starts, finishes, durations, sequences, etc., as required.

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### 1.3 QUALIFICATIONS OF SCHEDULER

The Contractor shall designate a scheduler who shall be responsible for the preparation of the project schedule and periodic updates. The scheduler shall have previous experience in creating and reviewing computerized schedules. The scheduler shall have the responsibility of updating and coordinating the schedule in a timely manner. Qualifications of this individual shall be submitted to the Contracting Officer for review with the Preliminary Project Schedule submission. The scheduler shall be full time whose sole responsibility will be scheduling and will be at the site at all times during progress of the work.

### PART 2 PRODUCTS (NOT APPLICABLE)

### PART 3 EXECUTION

#### 3.1 GENERAL

Pursuant to the Contract Clause, SCHEDULE FOR CONSTRUCTION CONTRACTS, a Project Schedule as described below shall be prepared. The scheduling of construction shall be the responsibility of the Contractor. Contractor management personnel shall actively participate in its development. Subcontractors and suppliers working on the project should also contribute in developing and maintaining an accurate and current Project Schedule. The approved Project Schedule shall be used to measure the progress of the work, to aid in evaluating time extensions, and to provide the basis for all progress payments.

#### 3.2 PROJECT SCHEDULE SUBMISSIONS

The Contractor shall provide the submissions as described below. A data disk and a printed, legible network diagram are required for each submission. Submissions shall contain the same level of detail as is being used by the contractor for project management.

##### 3.2.1 Preliminary Project Schedule Submission

The Preliminary Project Schedule, defining the contractor's planned operations for the first 90 calendar days shall be submitted within 15 calendar days after Notice to Proceed is acknowledged unless otherwise approved by the Contracting officer. Summary activities for the remainder of the project will be included along with budgeted costs for all activities. The sum of the budgeted costs shall equal the contract amount.

This schedule, upon acceptance, will be used for payment purposes not to exceed 90 calendar days after Notice to Proceed. After that time period, the approved, updated Initial Schedule shall be used.

##### 3.2.2 Initial Project Schedule Submission

The Initial Project Schedule shall be submitted for approval within 45 calendar days after Notice to Proceed is acknowledged unless otherwise approved by the Contracting Officer. This schedule shall provide a logical sequence of activities which represent work activities throughout the entire project and shall be at a level of detail appropriate as defined in paragraph PROJECT SCHEDULE. The Government has 30 days for approval.

### 3.2.3 Periodic Schedule Updates

Based on an evaluation of actual job progress during meetings specified in paragraph PERIODIC PROGRESS MEETINGS, the Contractor shall submit Periodic Schedule Updates. These periodic updates shall enable the Contracting Officer to assess the Contractor's progress. If the contractor fails or refuses to furnish the information and project schedule data which, in the judgement of the Contracting Officer or authorized representative, is necessary for verifying the contractor's progress, the contractor shall be deemed not to have provided an estimate upon which progress payments may be made.

## 3.3 SUBMISSIONS REQUIREMENTS

The following items shall be submitted by the Contractor with the Initial and Preliminary Project Schedule submissions and every Periodic Project Schedule Update throughout the life of the project:

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### 3.3.1 Data Disks

**Three** data disks containing the project schedule shall be provided. Data on the disks shall be in the format specified. The automated scheduling software utilized by the Contractor shall be capable of direct data input into the scheduling system currently in use by the Government or shall be in Standard Data Exchange Format (SDEF) as stated below. The Government can provide a list of scheduling programs which support SDEF. (The Government uses Primavera for Windows, Version 3.0, subject to current update). The Contractor will be responsible for the accuracy of this data and successful data transfer to the Government. In the event of faulty disk(s), the Contractor will be responsible for replacement.

#### 3.3.1.1 Standard Data Exchange Format

If direct exchange of data is not possible, data shall be provided in format according to ER 1-1-11, Appendix A, Scheduling System Data Exchange Format (SDEF) dated 15 June 95. If SDEF is used, records must conform to the sequence, column position, length, value, and field definitions described in the regulation.

#### 3.3.1.2 File Medium

Required data shall be submitted on 3.5 disks, formatted to hold 1.44 MB of data, under the Windows operating system.

#### 3.3.1.3 Disk Label

A permanent exterior label shall be affixed to each disk submitted. The label shall indicate the scheduling program used, format of data transfer (Primavera or SDEF), file name, type of schedule (original, update, or change), contract number, project name, project location, data date, and name and telephone number of person responsible for the schedule.

#### 3.3.1.4 File Name

Each file submitted shall have a name related to either the schedule data date, project name, or contract number. The Contractor shall develop a naming convention that will insure that the names of the files submitted are unique and in sequence.

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#### 3.3.2 Network Diagram

The Network Diagram shall be required on the preliminary and initial schedule submissions and on periodic schedule update submissions. The Network Diagram shall depict and display the order and interdependence of activities and the sequence in which the activities are to be accomplished.

Activity numbers, descriptions, durations, milestones and constraint dates must be shown, and the critical path easily apparent. The network diagram must be legible in its electronic form, or another means of production shall be required subject to Contracting Officer approval. Legibility shall be determined upon submission of the Preliminary Schedule. Completed progress shall be clearly and easily distinguishable from the critical path and incomplete work. The network diagram shall be time scaled.

#### 3.3.3 Narrative Report

A Narrative Report shall be provided with each periodic update of the project schedule. The Narrative Report shall include: a description of activities along the critical path, a description of current and anticipated problem areas or delaying factors and their impact, and an explanation of corrective actions to be taken if necessary to maintain and/or regain schedule. This report shall be provided for use with the updated schedule in evaluating current progress and as an indicator of upcoming progress. This report shall also accompany pay requests for payment evaluation.

#### 3.3.4 Approved Changes

Only project schedule changes that have been previously approved by the Contracting Officer shall be included in the periodic schedule updates.

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#### 3.3.5 Schedule Reports

The format for each activity for the schedule reports listed below shall contain: Activity Numbers, Activity Description, Original Duration, Remaining Duration, Early Start Date, Early Finish Date, Late Start Date, Late Finish Date, Total Float, Responsibility, Activity Earnings, Activity % Complete. Actual Start and Actual Finish Dates shall be printed for

those activities in-progress or completed.

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3.3.5.1 Activity Report

A list of all activities sorted according to activity number and then sorted according to Early Start Date. For completed activities, the Actual Start Date shall be used as the secondary sort.

3.3.5.2 Total Float Report

A list of all activities sorted in ascending order of total float. Activities which have the same amount of total float shall be listed in ascending order of Early Start Dates.

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3.3.5.3 Earnings Report

A compilation of the Contractor's Total Earnings on the project from the Notice to Proceed until the most recent Monthly Progress Meeting.

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3.3.5.4 Responsibility Report

A list of all activities sorted by Responsibility, then sorted by activity, late start date, then float. Report shall subtotal earnings and provide a % complete by Responsibility and then total project.

3.3.5.5 S - Curve

An S-Curve shall be provided with the initial and each periodic update of the project schedule showing, early, late, actual, and projected earnings. It may be on an 8 1/2" X 11" format. It shall show both bar chart (showing the monthly earnings) and a S-curve showing the cumulative earnings and cumulative % complete.

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3.4 PROJECT SCHEDULE

The computer software system utilized by the Contractor to produce the Project Schedule shall be capable of providing all requirements of this specification. Failure of the Contractor to meet the requirements of this specification shall result in the disapproval of the schedule. No activity duration shall be greater than 30 days. The Network shall contain a minimum of 600 Activities. The color/finish sample board shall be an activity on the Network with a duration of 110 days and a start date the same as the NTP. The cost of any single activity shall not exceed \$50,000.00.

3.4.1 Use of the Critical Path Method

The Critical Path Method (CPM) of network calculation shall be used to generate the Project Schedule. The Contractor shall provide the Project

Schedule in the Precedence Diagram Method (PDM).

#### 3.4.2 Level of Detail Required

The Project Schedule shall be at a level of detail appropriate for the size and complexity of the project. Failure to develop or update the Project Schedule or provide data to the Contracting Officer at the appropriate level of detail, as specified by the Contracting Officer, shall result in the disapproval of the schedule. The Contracting Officer will use the following conditions to determine the appropriate level of detail to be used in the Project Schedule.

#### 3.4.3 Activity Durations

Contractor submissions shall be required to follow the direction of the Contracting Officer regarding reasonable activity durations. Reasonable durations are those that allow the progress of activities to be accurately determined between payment periods.

#### 3.4.4 Project Activities, General

Project activities shall consist of all construction activities, to include design-related activities, mobilization, demobilization, placement of warranty tags, O&M manuals, jobsite clean-up, and required testing and training. Tasks related to the procurement of long-lead materials or equipment shall be included as separate activities in the project schedule, to include procurement, fabrication, delivery, installation, start-up, testing, and training.

#### 3.4.5 Government Activities

Government and other agency activities that could impact progress shall be shown. These activities include, but are not limited to the review of Government-approved submittals, inspections, utility tie-ins, delivery of Government-furnished equipment (GFE) and issuance of notice to proceed for phasing requirements.

#### 3.4.6 Resources

All appropriate activities shall be assigned resources (labor, materials, equipment) that are expected to be used during the execution of the activity.

#### 3.4.7 Costs

All work activities shall be cost-loaded with the amount budgeted. The sum of all activities in the schedule shall equal the total contract amount.

#### 3.4.8 Responsibility

All activities shall be identified in the project schedule by the party responsible for performing the work. Responsibility includes, but is not limited to, the subcontracting firm, contractor work force, or government agency performing a given task.

### 3.4.9 Work Areas

All activities shall be identified in the project schedule by the work area in which the activity occurs.

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### 3.4.10 Modification Number

Any activity that is added or changed by contract modification, including modifications for claims, shall be identified by a Government-furnished Modification number in lieu of the bid item.

### 3.4.11 Bid Item

All activities shall be identified in the project schedule by the Bid Item to which the activity belongs. The bid item for each appropriate activity shall be identified by the Bid Item Code.

### 3.4.12 Phase of Work

All activities shall be identified in the project schedule by the phases of work in which the activity occurs. The project phase of each activity shall be by a unique Phase of Work Code.

### 3.4.13 Category of Work

All Activities shall be identified in the project schedule according to the category of work which best describes the activity. Category of work refers, but is not limited to, the procurement chain of activities including such items as submittals, approvals, procurement, fabrication, delivery, installation, start-up, and testing. The category of work for each activity shall be identified by the Category of Work Code.

### 3.4.14 Data Dictionary

The Contractor shall submit a coding scheme that shall be used throughout the project for all activity codes contained in the schedule. The coding scheme submitted shall list the values for each activity code category and translate those values into project specific designations. For example, a Responsibility Code Value, "ELE", may be identified as "Electrical Subcontractor." Activity code values shall represent the same information throughout the duration of the contract.

### 3.4.15 Project Start Date

The schedule shall start no earlier than the date that the Notice to Proceed (NTP) is acknowledged. The Contractor shall include as the first activity in the project schedule an activity called "Start Project" or similar. The "Start Project" activity shall have a constraint date equal to the date that the NTP was acknowledged and a zero day duration.

### 3.4.16 Constraint of Last Activity

The Contractor shall include as the last activity in the project schedule an activity call "End Project". The "End Project" activity shall have a constraint date equal to the completion date for the project and a zero day duration. Completion of the last activity in the schedule shall be constrained by the currently approved contract completion date. Calculation on project updates shall be such that if the early finish of the last activity falls after the contract completion date, then the float calculation shall reflect a negative float on the critical path.

#### 3.4.17 Interim Completion Dates

Contractually specified interim phasing completion dates shall also be constrained to show negative float if the early finish date of the last activity in that phase falls after the interim completion date.

#### 3.4.18 Start Phase

The Contractor shall include as the first activity for a project phase an activity called "Start Phase X" where "X" refers to the phase of work. The "Start Phase X" activity shall have a constraint date equal to the date that the NTP for the phase was acknowledged and a zero day duration.

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#### 3.4.19 End Phase

The Contractor shall include as the last activity in a project phase an activity called "End Phase X" where "X" refers to the phase of work. The "End Phase X" activity shall have a constraint date equal to the completion date for the phase and a zero day duration.

#### 3.4.20 Lag Activities

Duration for Lag Activities shall not have negative value.

#### 3.4.21 Open Ends

Open Ended Activities other than the last activity, " End Project", shall only be used with approval of the Contracting Officer.

#### 3.4.22 Ownership of Float

Float available in the schedule, at any time, shall not be considered for the exclusive use of either the Government or the Contractor. Use of Zero Free Float and Zero Total Float constraints shall not be allowed.

### 3.5 BASIS FOR PAYMENT

The schedule shall be the basis for measuring Contractor progress. Lack of an approved schedule, scheduling personnel, or approved periodic schedule updates shall result in an inability of the Contracting Officer to evaluate Contractor progress for the purposes of payment. In this event, progress payments will not be made until corrective action or additional information is provided which is determined sufficient in the judgement of the contracting Officer to analyze progress. The contractor's pay estimates

will be based upon the amount of work completed, as agreed upon between Government and Contractor personnel during the Periodic Progress Meetings further specified below.

### 3.6 DEFAULT PROGRESS DATA DISALLOWED

Actual Start and Finish dates shall not be automatically updated by default mechanisms that may be included in CPM scheduling software systems. Actual Start and Finish dates on the CPM schedule shall match those dates provided from Contractor Quality Control Reports.

### 3.7 OUT-OF-SEQUENCE PROGRESS

Activities that have posted progress without predecessors being completed (Out-of-Sequence Progress) shall be allowed only by the case-by-case approval of the Contracting Officer. If approval is not given, a revised schedule that reflects corrections to the original logic to show the current sequence of activities shall be submitted prior to payment being made for those items of work.

### 3.8 PERIODIC PROGRESS MEETINGS

Progress meetings to discuss progress or payment shall be at regular intervals mutually agreed to at the preconstruction conference. During this meeting the Contractor will describe, on an activity by activity basis, all proposed revisions and adjustments to the project schedule required to reflect the current status of the project. During this meeting, the Contracting Officer or Representative will approve activity progress, proposed revisions, and adjustments as appropriate.

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The contractor shall be responsible for meeting minutes. Progress meeting minutes shall include as a minimum: a) activity current progress; b) future activities scheduled within next 30 days; c) submittal status; d) forthcoming Preparatory and Initial Inspections; e) RFI log; f) Deficiency Log; g) Change Status; h) Outstanding Critical Actions; and i) Previous Meeting Discussions.

#### 3.8.1 Meeting Attendance

The Contractor's Project Manager, Quality Control Manager or staff, and Scheduler shall attend the periodic progress meeting along with similar representation by the Government.

#### 3.8.2 Update Submission Following Progress Meeting

A complete update of the project schedule containing all approved progress, revisions, and adjustments, based on the regular progress meeting, shall be submitted not later than seven (7) working days after the periodic progress meeting.

#### 3.8.3 Progress Meeting Agenda

Update information, including Actual Start Dates, Actual Finish Dates,

Remaining Durations, and Cost to Date shall be subject to the approval of the Contracting Officer. The following is a minimum set of items which the Contractor shall address, on an activity by activity basis, during each progress meeting:

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3.8.3.1 Start and Finish Dates

**The Actual Start and Actual Finish dates for each activity currently in progress or completed.**

3.8.3.2 Duration

The estimated Remaining Duration for each activity in progress; calculations must be based on Remaining Duration in applicable work periods for each activity.

3.8.3.3 Cost

The earnings for each activity started. Payment shall be based on earnings for each in-progress or completed activity. Payment for individual activities shall not be made for work that contains quality defects. A portion of the overall project amount may be retained based on lack of satisfactory progress.

3.8.3.4 Logic Changes

All logic changes pertaining to Notice to Proceed on change orders, change orders to be incorporated into the schedule, contractor-proposed changes in work sequence, corrections to schedule logic for out-of-sequence progress, lag durations, and other changes that have been made pursuant to contract provisions shall be specifically identified and discussed.

3.9 REQUESTS FOR TIME EXTENSIONS

Any request for a time extension from the Contractor, whether as a result of added or changed work due to a modification, a differing site condition, or unusually severe weather, shall be accompanied by justification, project schedule data and supporting evidence as the Contracting Officer may deem necessary for a determination as to whether or not the Contractor is entitled to an extension of time under the provisions of the contract. Submission of proof of delay, based on revised activity logic, duration, and costs (updated to the specific date that the delay occurred) is obligatory to any approvals. Such a request shall be in accordance with the requirements of other appropriate Contract Clauses and shall include, as a minimum:

- a. A list of affected activities.
- b. A brief explanation of the causes of the change.
- c. An analysis of the overall impact of the change proposed.
- d. A sub-network of the affected area.

Activities impacted in each justification for change shall be identified by a unique activity code contained in the required data file.

### 3.10 DIRECTED CHANGES

If Notice to Proceed (NTP) is issued for changes prior to settlement of price and/or time, the Contractor shall submit proposed schedule revisions to the Contracting Officer within seven (7) calendar days of the NTP being issued. The proposed revisions to the schedule will be approved by the Contracting Officer prior to inclusion of those changes within the project schedule. If the Contractor fails to submit the proposed revisions, the Contracting Officer may furnish the Contractor suggested revisions to the project schedule. The Contractor shall include these revisions in the project schedule until the Contractor submits revisions, and final changes and impacts have been negotiated. If the Contractor has any objections to the revisions furnished by the Contracting Officer, then the Contractor shall advise the Contracting Officer within seven (7) calendar days of receipt of the revisions. Regardless of the objections, the Contractor will continue to update their schedule with the Contracting Officer's revisions until a mutual agreement in the revisions may be made. If the Contractor fails to submit alternative revisions within seven (7) calendar days of receipt of the Contracting Officer's proposed revisions, the Contractor will be deemed to have concurred with the Contracting Officer's proposed revisions. The proposed revisions will then be the basis for an equitable adjustment for performance of the work.

-- End of Section --

SECTION 01330

CONSTRUCTION SUBMITTAL PROCEDURES  
**Amend #0001**

PART 1 GENERAL

1.1 SUMMARY

1.1.1 Section Includes

This section includes administrative and procedural requirements for construction submittals presented by the Contractor. This section also includes requirements for developing, submitting and maintaining a "Submittals Register."

1.1.2 Section Excludes

This section does not include requirements for facility design submittals which are specified in Section 01015 DESIGN REQUIREMENTS AFTER AWARD.

1.2 SUBMITTAL IDENTIFICATION

Submittals required are identified by SD numbers as follows:

SD-01 Data

Submittals which provide calculations, descriptions, or documentation regarding the work.

SD-02 Manufacturer's Catalog Data

Data composed of catalog cuts, brochures, circulars, specifications and product data, and printed information in sufficient detail and scope to verify compliance with requirements of the contract documents. A type of product data.

SD-03 Manufacturer's Standard Color Charts

Preprinted illustrations displaying choices of color and finish for a material or product. A type of product data.

SD-04 Drawings

Submittals which graphically show relationship of various components of the work, schematic diagrams of systems, details of fabrication, layouts of particular elements, connections, and other relational aspects of the work.

SD-05 Design Data

Design calculations, mix designs, analyses, or other data, written in nature and pertaining to a part of the work. A type of shop drawing.

## SD-06 Instructions

Preprinted material describing installation of a product, system or material, including special notices and material safety data sheets, if any, concerning impedances, hazards, and safety precautions.

## SD-07 Schedules

Tabular lists showing location, features, or other pertinent information regarding products, materials, equipment, or components to be used in the work.

## SD-08 Statements

A document, required of the Contractor, or through the Contractor, from a supplier, installer, manufacturer, or other lower tier Contractor, the purpose of which is to confirm the quality or orderly progression of a portion of the work by documenting procedures, acceptability of methods or personnel, qualifications, or other verifications of quality.

## SD-09 Reports

Reports of inspections or tests, including analysis and interpretation of test results. Each report shall be properly identified. Test methods used shall be identified and test results shall be recorded.

## SD-10 Test Reports

A report signed by an authorized official of a testing laboratory that a material, product, or system identical to the material, product or system to be provided has been tested in accordance with requirements specified by naming the test method and material. The test report must state the test was performed in accordance with the test requirements; state the test results; and indicate whether the material, product, or system has passed or failed the test. Testing must have been within three years of the date of award of this Contract. A type of product data.

## SD-11 Factory Test Reports

A written report which includes the findings of a test required to be performed by the Contractor on an actual portion of the work or prototype prepared for this project before it is shipped to the job site. The report must be signed by an authorized official of a testing laboratory and must state the test was performed in accordance with the test requirements; state the test results; and indicate whether the material, product, or system has passed or failed the test. A type of shop drawing.

## SD-12 Field Test Reports

A written report which includes the findings of a test made at the job site, in the vicinity of the job site, or on a sample taken from the job site, on a portion of the work, during or after installation. The report must be signed by an authorized official of a testing laboratory or agency

and must state the test was performed in accordance with the test requirements; state the test results; and indicate whether the material, product, or system has passed or failed the test. A type of shop drawing.

#### SD-13 Certificates

Statement signed by an official authorized to certify on behalf of the manufacturer of a product, system or material, attesting that the product, system or material meets specified requirements. The statement must be dated after the award of the contract, must state the Contractor's name and address, must name the project and location, and must list the specific requirements which are being certified.

#### SD-14 Samples

Samples, including both fabricated and unfabricated physical examples of materials, products, and units of work as complete units or as portions of units of work.

#### SD-15 Color Selection Samples

Samples of the available choice of colors, textures, and finishes of a product or material, presented over substrates identical in texture to that proposed for the work. A type of sample.

#### SD-16 Sample Panels

An assembly constructed at the project site in a location acceptable to the Contracting Officer and using materials and methods to be employed in the work; completely finished; maintained during construction; and removed at the conclusion of the work or when authorized by the Contracting Officer. A type of sample.

#### SD-17 Sample Installations

A portion of an assembly or material constructed where directed and, if approved, retained as a part of the work. A type of sample.

#### SD-18 Records

Documentation to record compliance with technical or administrative requirements.

#### SD-19 Operation and Maintenance Manuals

Data which forms a part of an operation and maintenance manual.

### 1.3 SUBMITTAL CLASSIFICATION

Submittals are classified as follows:

#### 1.3.1 Government Approved Construction Submittals

Governmental approval is required for any deviations from the Contract requirements and other items as designated in the RFP Solicitation or by the Contracting Officer. Within the terms of the Contract Clause entitled "Specifications and Drawings for Construction," they are considered to be "shop drawings."

#### 1.3.2 Information Only

All submittals not requiring Government approval will be for information only. They are not considered to be "shop drawings" within the terms of the Contract Clause referred to above.

#### 1.4 GOVERNMENT APPROVED SUBMITTALS

The Contracting Officer's approval of submittals shall not be construed as a complete check, but will indicate only that the general method of construction, materials, detailing and other information are satisfactory. Government approval will not relieve the Contractor of the responsibility for any error which may exist, as the Contractor under the Design and Contractor Quality Control (CQC) requirements of this contract is responsible for design, dimensions, all design extensions such as the design of adequate connections and details, and the satisfactory construction of all work. After submittals have been approved by the Contracting Officer, no resubmittal for the purpose of substituting materials or equipment will be considered unless accompanied by an explanation of why a substitution is necessary.

#### 1.5 DISAPPROVED SUBMITTALS

The Contractor shall make all corrections required by the Contracting Officer, obtain the Designer of Record's approval, and promptly furnish a corrected submittal in the form and number of copies specified for the initial submittal. If the Contractor considers any correction indicated on the submittals to constitute a change to the contract, a notice in accordance with the Contract Clause "Changes" shall be given promptly to the Contracting Officer.

#### 1.6 WITHHOLDING OF PAYMENT

Payment for materials incorporated in the work will not be made if all required Designer of Record or required Government approvals have not been obtained.

#### 1.7 GOVERNMENT REVIEW OF INFORMATION ONLY SUBMITTALS

Contracting Officer review of Information Only submittals shall be for conformance with the Contract requirements but not for approval. The Government reserves the right to require the Contractor to resubmit any item found not to comply with the Contract requirements. This does not relieve the Contractor from the obligation to furnish material conforming to the Contract; will not prevent the Contracting Officer from requiring removal and replacement of nonconforming material incorporated into the Work; and does not relieve the Contractor of the requirements to furnish samples for testing by the Government laboratory or for check testing by

the Government in those instances where the technical specifications so prescribe.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 GENERAL

The Contractor shall make submittals as required by the specifications. The Contracting Officer may request submittals in addition to those specified when deemed necessary to adequately describe the work covered in the respective sections. Units of weights and measures used on all submittals shall be the same as those used in the contract drawings. Each submittal shall be complete and in sufficient detail to allow ready determination of compliance with contract requirements. Prior to submittal, all items shall be checked and approved by the Contractor's Quality Control (CQC) System Manager representative and each item shall be stamped, signed, and dated by the CQC representative indicating action taken. In addition, all submittals shall be checked and approved by the Designer of Record, and each submittal shall be stamped, signed, and dated by the Designer of Record certifying that the submittal complies with the Contract requirements. Proposed deviations from the contract requirements shall be clearly identified. Submittals shall include items such as: Contractor's, manufacturer's, or fabricator's drawings; descriptive literature including (but not limited to) catalog cuts, diagrams, operating charts or curves; test reports; test cylinders; samples; O&M manuals (including parts list); certifications; warranties; and other such required submittals. Submittals requiring Government approval shall be scheduled and made prior to the acquisition of the material or equipment covered thereby. Samples remaining upon completion of the work shall be picked up and disposed of in accordance with manufacturer's Material Safety Data Sheets (MSDS) and in compliance with existing laws and regulations.

Amend #0001

3.2 SUBMITTAL REGISTER (ENG FORM 4288)

The Contractor shall prepare and maintain a Submittal Register (ENG Form 4228) for the technical specifications. At the end of this section is one set of ENG Forms 4288 listing those items of for which submittals are required by the RFP's Division 1 and mandatory specification sections; this list is an illustration of how the submittal register (ENG Form 4228) shall look for the technical specifications. This list may not be complete. It is the Contractor's responsibility to review, edit, and complete this list as necessary prior to submission for Government approval.

Amend #0001

The Contractor shall furnish 4 sets of ENG Forms 4288 listing each item of equipment and material for which submittals are required by the specifications to the Contracting Officer for approval with each design submittal and with the corrected final construction documents; columns "c" thru "o" shall be completed by the Contractor. The ENG Forms 4288 will become a part of the Contract after final approval. The Contractor shall keep this diskette up to date and shall submit it to the Government

together with the monthly payment request. The approved submittal register will become the scheduling document and will be used to control submittals throughout the life of the contract. This register and the progress schedules shall be coordinated. Submission will be upon request only.

Amend #0001

### 3.3 SCHEDULING

Submittals covering component items forming a system or items that are interrelated shall be scheduled to be coordinated and submitted concurrently. Certifications to be submitted with the pertinent drawings shall be so scheduled. Adequate time (a minimum of 60 calendar days exclusive of mailing time) shall be allowed and shown on the register for review and approval. No delay damages or time extensions will be allowed for time lost in late submittals. An additional 30 days shall be allowed and shown on register and contract schedule for review and approval of submittals related to : refrigeration and HVAC; Controls; Roofing, Fire Alarm and Fire Protection systems; hardware and structural steel.

### 3.4 TRANSMITTAL FORM (ENG FORM 4025)

The sample transmittal form (ENG Form 4025) attached to this section shall be used for submitting both Government approved and information only submittals in accordance with the instructions on the reverse side of the form. These forms will be furnished to the Contractor. This form shall be properly completed by filling out all the heading blank spaces and identifying each item submitted. Special care shall be exercised to ensure proper listing of the specification paragraph and/or sheet number of the contract drawings pertinent to the data submitted for each item.

### 3.5 SUBMITTAL PROCEDURE

Submittals shall be made as follows:

#### 3.5.1 Procedures

##### 3.5.1.1 Additional Instructions

In addition to the requirements of this section, additional instructions are specified in the attachment "INSTRUCTIONS TO CONTRACTORS FOR TRANSMITTAL REQUIREMENTS" located at the end of this section.

##### 3.5.1.2 Contractor Review

The Contractor's quality control representative shall review the listing at least every 30 days and take appropriate action to maintain an effective and updated system. A copy of the register shall be maintained at the job site. Revised and/or updated registers shall be submitted to the Contracting Officer at least every 60 days in quadruplicate (complete register need not be provided, only those portions containing additions or changes).

3.5.1.3 Number of Copies

The Contractor shall provide 4 sets of all submittals.

3.5.1.4 Address to Receive Submittals

Submittals shall be sent to the Corps of Engineers' Area Office assigned to the project.

Amend #0001

3.5.1.5 Additional Government Approved Submittals

In addition to those specified in PART 1 paragraph SUBMITTAL CLASSIFICATION, the following classifications of submittals also require Governmental approval:

a. Fire Protection and Detection Submittals

In addition to the submittals required by each technical specification section, the Contractor shall prepare and submit, as one integrated submittal, shop drawings for the fire protection/detection system. This submittal shall also include sprinkler plans and sections, fire detection and alarm plans and risers, and catalog cuts of proposed equipment. The Contractor shall submit proof that the shop drawings were prepared by an engineer regularly engaged in fire protection/detection systems for at least 2 years, and that they are sealed by a registered professional engineer. **Shop drawings for the fire protection/detection system shall be prepared on full-size reproducible. The shop drawings submitted for review shall be submitted on full-size prints. After updating all deviations, modifications, and changes, the final submittal shall be on reproducible and CADD tapes; these will represent the final as-built drawings.**

b. Asbestos and lead-based paint abatement submittals.

c. Color and finish sample submittals.

d. Hardware

e. Roofing

3.5.1.6 Certificates of Compliance

Any certificates required for demonstrating proof of compliance of materials with specification requirements shall be executed in the number of copies required by the above paragraph "Number of Copies." Each certificate shall be signed by an official authorized to certify in behalf of the manufacturing company and shall contain the name and address of the Contractor, the project name and location, and the quantity and date or dates of shipment or delivery to which the certificates apply. Copies of laboratory test reports submitted with certificates shall contain the name and address of the testing laboratory and the date or dates of the tests to which the report applies. Certification shall not be construed as relieving

the Contractor from furnishing satisfactory material, if, after tests are performed on selected samples, the material is found not to meet the specific requirements.

### 3.5.2 Deviations

For submittals which include proposed deviations requested by the Contractor, the column "variation" of ENG Form 4025 shall be checked. The Contractor shall set forth in writing the reason for any deviations and annotate such deviations on the submittal. The Government reserves the right to rescind inadvertent approval of submittals containing unnoted deviations. Deviations require both Designer of Record approval and Government approval.

### 3.6 CONTROL OF SUBMITTALS

The Contractor shall carefully control procurement operations to ensure that each individual submittal is made on or before the Contractor scheduled submittal date shown on the approved "Submittal Register."

### 3.7 GOVERNMENT APPROVED SUBMITTALS

Upon completion of review of submittals requiring Government approval, the submittals will be identified as having received approval by being so stamped and dated. One (1) copy of the submittal will be returned to the Contractor. The remainder will be retained by the Government.

### 3.8 INFORMATION ONLY SUBMITTALS

Normally submittals for information only will not be returned. Approval of the Contracting Officer is not required on information only submittals.

### 3.9 STAMPS

Stamps used by the Contractor's CQC and by the Designer of Record on the submittal data to certify that the submittal meets contract requirements shall be similar to the following:

CONTRACTOR
(Firm Name)
_____ Approved
_____ Approved with corrections as noted on submittal data and/or attached sheets(s).
SIGNATURE: _____ (CQC System Manager)
SIGNATURE: _____ (Designer of Record)
TITLE: _____
DATE: _____

### 3.10 INSTRUCTIONS TO CONTRACTORS FOR TRANSMITTAL REQUIREMENTS

#### FORT WORTH DISTRICT FOR INFORMATION ONLY (FIO) AND GOVERNMENT APPROVED (GA) SUBMITTALS

#### 3.10.1 General Requirements

- a. General requirements for transmittal of FIO and GA submittals is contained in the preceding specifications. Specific requirements on how to transmit FIO and GA Submittals are outlined herein.
- b. GA and FIO submittal data shall be transmitted under separate ENG Form 4025s and assigned different Transmittal Numbers. If GA and FIO submittal data is included in the same submittal, using the same ENG Form 4025, they will be considered an FIO submittal until the contractor corrects the error.
- c. The Contractor shall designate on each Eng Form 4025, above the Transmittal No., either FIO or GA to show the transmittal type. This procedure allows ready identification of FIO or GA submittals. The Government reserves the right to redesignate the category (GA or FIO) of submittals incorrectly identified by the Contractor.
- d. The Contractor shall assure all FIO submittals for each technical section are submitted prior to or concurrent with the GA submittals for that technical section. If appropriate FIO submittals have not been submitted, the GA submittal will be returned disapproved.

e. Data transmitted with ENG Form 4025 shall be identified by marking it with the same item number(s) appearing in the "Item No." column on the form. The model number, part number, color, etc., of proposed materials or equipment shall be highlighted or otherwise identified.

Amend #0001

### 3.10.2 Specific Requirements for For Information Only (FIO) Submittals

a. One fully coordinated FIO submittal shall be made for each technical section. Each FIO submittal listed on the ENG Form 4288, shall be submitted as a separate item on the ENG Form 4025 whenever possible. Technical data provided with the ENG Form 4025 shall conform to the "Submittals" paragraph in each Technical Section. (Example: SD-04 Drawings as outlined herein.)

b. Items such as mill certificates or other test data unavailable until the equipment/material is manufactured/fabricated shall not be identified on the initial ENG Form 4025. An explanation in the "Remarks" section shall explain this data will be submitted by Transmittal Number [ ] (fill in transmittal number) after materials are manufactured/fabricated (or other explanations as appropriate). A separate submittal for long lead time equipment or material may be made if sufficient data is furnished to show contract compliance. An explanation shall be provided in the "Remarks" section or on a separate sheet, if necessary, explaining why a partial submittal is being made. Explanation shall include the estimated delivery date of the above equipment/material and the Transmittal Number of the submittal that will contain data required by the particular specification section for the remaining equipment/materials. For contracts with several buildings/structures, separate transmittals for each technical section may be used if each building/structure is noted in the "Remarks" section of the ENG Form 4025. Samples of materials shall be submitted along with technical data, not under separate transmittals.

#### 3.10.2.1 FIO Submittal Review

a. The Contractor's Quality Control (CQC) Representative has full responsibility for reviewing and certifying that all FIO submittal data and all equipment and/or materials comply with the contract. In addition, submittals shall be checked and approved by the Designer of Record, and each submittal shall be stamped, signed, and dated by the Designer of record certifying that the submittal complies with the Contract requirements prior to submittal to the Government. FIO Submittals are provided to the Government "For Information Purposes Only." Contracting Officer approval is not required and will not be given. The Government will not code any FIO submittals. Copies of FIO Submittals will not be returned to the Contractor.

b. However, the Government may perform QA reviews and re-reviews of FIO submittals at any time during the contract. If the Government determines submittal data is incomplete or not in compliance with contract, comments will be provided. Comments will state, "Disagree with Contractor's Certified Compliance" and list items not in compliance or not provided as required by the contract. The Contractor shall respond to all comments by

return FIO resubmittal on a new ENG Form 4025. Repeated incomplete or non-complying FIO submittals with improper certifications may result in disapproval of the Contractor's Quality Control (CQC) Program and/or possible replacement of the Contractor Quality Control (CQC) personnel.

c. Performance of, or failure to perform QA submittal reviews or Government requirement to submit additional data on FIO submittals, will not prevent the Contracting Officer from requiring removal and replacement of non-conforming material incorporated into the work. No adjustment for time or money will be allowed for corrections required because of non-compliance with contract plans and/or specifications.

### 3.10.3 Specific Requirements for Government (GA) Approved Submittals

a. The Contractor's Quality Control Representative is responsible for assuring all data submitted is complete and in compliance with contract requirements. In addition, submittals shall be checked and approved by the Designer of Record, and each submittal shall be stamped, signed, and dated by the Designer of record certifying that the submittal complies with the contract requirements prior to submittal to the Government. The Contractor shall assure all FIO submittals are submitted prior to or concurrent with the GA submittal for each technical section. If the FIO submittals have not been submitted, the GA submittal will be returned disapproved.

b. A separate submittal shall be made for each technical section with GA submittals. FIO submittal data shall not be mixed with GA submittal data.

c. The Government will provide written comments as appropriate and assign action codes to each item outlined on the back of the ENG Form 4025. One (1) stamped and dated copy of the submittal, along with any comments, will be provided to the Contractor. Action Code "A"- Approved As Submitted, and Code "B"- Approved Except As Noted, constitutes Government Approval. The Contractor shall resubmit under a separate Transmittal Number all data necessary to show compliance with Government comments on all other action codes.

d. Government review time, as stated in Paragraph 3.3 - Scheduling, is a minimum of sixty (60) calendar days unless otherwise specified. Government review time is exclusive of mailing time. Review time starts the day of receipt by the Government and continues until the day comments or notice of approval is provided the Contractor.

e. If the Contractor considers any Government review comment to constitute a change to the contract, notice shall be given promptly as required under the Contract Clause entitled "Changes." No request for "Equitable Adjustment" will be honored unless the Contractor complies fully with the prompt notice provisions of the contract.

### 3.10.4 Variations/Deviations/Departures from the Contract Requirements

Contractor proposed variations, deviations, or departures from the contract requirements shall be noted in the "Variation" column of ENG Form 4025 with an asterisk, for each FIO submittal. A brief explanation, and the Transmittal Number of the appropriate GA submittal (as explained

below), shall be added to the "Remarks" section of the Form (or a separate sheet, if necessary). Each variation, deviation, or departure shall be listed as an item on a separate GA submittal, which may contain other GA submittal items. Variations, deviations, or departures will be processed and approved the same as GA submittals, provided they are included in a GA submittal. Variations, deviations, or departures will not be approved in the FIO submittal, and will be disapproved, until they are properly submitted on a GA submittal. Variations, deviations, or departures shall contain sufficient information to permit complete evaluation. Additional sheets may be used to fully explain why a variation, deviation, or departure is requested. The Government reserves the right to disapprove or rescind inadvertent approval of submittals containing unnoted variations, deviations, or departures.

#### 3.10.5 Submittal Numbering

Each submittal shall cover only one specification section. For purposes of consistency and to provide compatibility with the Government's computerized submittal register, submittal numbers shall include a specification section prefix and special suffixes. Note the following examples (for Technical Section 07416):

a. New submittals - 07416-01, 07416-02, etc.

b. Resubmittals -

(1) First resubmittal - 07416-01.01, 07416-02.01, etc.

(2) Second resubmittal - 07416-01.02, 07416-02.02, etc.

(3) Third resubmittal - 07416-01.03, 07416-02.03, etc.

-- End of Section --

## SECTION 01340

## COLOR/FINISH SAMPLE BOARDS

**Amend #0001**

## PART 1 GENERAL (NOT APPLICABLE)

## PART 2 PRODUCTS

## Amend #0001

## 2.1 COLOR/FINISH SAMPLE BOARDS

Color/finish board(s) shall have attached samples of all exterior and interior appearance related construction items the Contractor proposes to furnish, including, but not limited to, such items as masonry, coping, downspouts, roofs, EFIS, interior and exterior paints and finishes; wall covering; trim items; carpet; floor, wall and ceiling tiles; floor base; doors; plastic laminates for cabinet work, signage, bathroom partitions, window treatments, etc. Each sample shall indicate color, texture, and finish; and, if patterned, shall be large enough to define full pattern. Samples shall be identified as to type of material, area of installation, manufacturer, and transmittal number under which certification of the material represented has been submitted in accordance with the requirements of Section 01330 SUBMITTAL PROCEDURES. A separate color/finish board shall be provided for each building. Each board shall be labeled with the facility building number, the title of contract, contract number, and name of Contractor. Samples shall be mounted on a 3-mm thick white board no larger than 610 mm X 915 mm. If necessary and as approved by the Government, more than one board may be provided for a building. Epoxy glue, hot-melt glue, or contact cement shall be used to attach samples; Scotch tape, double-backed tape, or rubber cement will not be acceptable. Cover of binders shall contain title of contract, contract number, and name of Contractor.

## PART 3 EXECUTION

## 3.1 SUBMITTAL PROCEDURES

One (1) complete set of coordinated color/finish sample board(s) shall be submitted to the Contracting Officer for approval within a period of time not to exceed 65 calendar days after notice to proceed (NTP). Contractor shall ensure that interior finish item technical data submittals are timely and that submittal actions have been completed before submitting sample board(s). Samples shall not be submitted with technical data, as approvals will not be given for samples submitted separately from the color/finish sample board(s). Upon receipt of the sample board(s), a 60-day review period by the Government can be anticipated.

## 3.2 GOVERNMENT APPROVAL

Approval of the total color/finish sample board(s) shall be obtained before start of finish work involving items included on the board(s).

Amend #0001

3.3 FINAL SUBMITTAL

After receipt of final approval from the Government, four (4) complete sets of approved and corrected color-finish sample boards shall be prepared and submitted to the Contracting Officer.

-- End of Section --

SECTION 01368

SPECIAL PROJECT PROCEDURES FOR FORT HOOD  
**Amend #0001**

PART 1 GENERAL

1.1 FORT HOOD AIRFIELDS

Contractors performing work under this contract may use airfields at Fort Hood with prior written notification and approval, providing:

a. All requests for Installation Airfield use shall be coordinated through the Office of the Commander, Installation Airfields, AFZF-DPC-AC, Hood Army Airfield, Fort Hood, TX 76544, telephone (817) 287-4266/5836.

b. Potential users shall submit completed DA Forms 5205-R (Certificate of Insurance), 5206-R (Civil Aircraft Landing Permit), and 5207-R (Hold Harmless Agreement). Forms are available through the Point of Contact (POC) mentioned in paragraph (a) above. User requests and specified forms shall be submitted at least 60 days before the first intended landing.

1.2 DIGGING PERMITS

The Contractor shall obtain digging permits directly from the Fort Hood Post DPW before any drilling, digging, or excavation is undertaken. Provide a completed form FHT 420-X10, Coordination for Land Excavation, to the DPW building 4228, Fort Hood, Texas for each permit. Allow 20 days for Government review of digging permit requests. A digging permit for a specified area of excavation expires 30 days after the issue date; Contractor must re-apply for a new permit to perform excavation in the area if the excavation was not started within the 30-day period. Permits will identify all underground utilities within 1500 mm of the designated area. Contractor shall be responsible for all repairs, costs, and damages due to excavating without permit or damaging an identified utility. Unidentified utilities shall be repaired by the Contractor at Government expense.

1.3 CONDITIONS FOR USE OF FORT HOOD LANDFILL

Use of the Fort Hood Municipal Solid Waste Landfill, located at the intersection of Turkey Run Road and Clark Road, by the Contractor is subject to the operating requirements imposed on the landfill by the Landfill Operating Permit. All waste delivered to the landfill will be inspected by the landfill operating contractor for materials that are not authorized in the landfill. Trucks that contain unauthorized waste will be diverted for removal of the unauthorized material before being allowed to proceed to the working facility to dump their load. Landfill operating hours are 0730-1700 Monday through Friday and 0730-1400 on Saturday. Questions concerning landfill policy and procedures may be answered by calling the landfill at 532-2256. The following classes of materials are not authorized in the Fort Hood Municipal Solid Waste Landfill and will be

diverted as described below:

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**Recyclables:** Cardboard and paperboard, light metal, aluminum and steel containers, paper, and plastic containers. All materials shall be segregated prior to disposal. Trucks entering the landfill with recyclable materials will be directed to a series of roll-off containers located at the entrance to the landfill for removal of the materials. Contractor/Transporters will be responsible for removing the unauthorized materials from the load and placing them in the properly marked container before proceeding to dump their load.

**Compost Materials:** Untreated wood, branches, shrubs, grass, woodchips, unserviceable or odd sized pallets should be separated from the refuse load and delivered to the Fort Hood Compose Center located across Turkey Run Road from the landfill.

**Clean Fill Material and Inert Constructions and Demolition Wastes:** Soil, sand, sod, rock, clean masonry, brick, concrete, and pavement. These materials are not accepted at the landfill. Trucks containing the materials must be disposed of as directed by the Contracting Officer (KO) or the KO's Authorized representative.

**Salvageable Items:** Tires, white goods and appliances, bulk scrap metal, lead-acid batteries, and engine and machine parts. Salvageable items should be delivered to DRMO Bldg. 4286, located at 80th St and Tank Destroyer Blvd, phone 287-2723, Monday-Thursday, 0730-1300.

**Serviceable Pallets:** Serviceable pallets are to be delivered to Post Recycling Center (Bldg. 1345, located at 65th St. and Railhead Dr, phone 287-6732, Monday-Friday, 0730-1600.)

**Freon:** Freon shall be collected in 50lb retrievable containers and turned in to DPW supply, Bldg. 4406, 77th and Warehouse, phone 288-2383, Monday-Thursday, 0630-1700. An empty container will be furnished upon turn-in of the full container. Each container must be labeled (R-12, R-22, etc.) and should not be mixed. If Freon is unintentionally mixed, the Contractor shall properly label the container as mixed and inform the DPW supply of the suspected mixture.

**Regulated Waste:** Regulated wastes such as liquid waste, fluorescent light bulbs, oil filters, ordinance, explosives, pressurized gases, PCB ballasts, paints, solvents, antifreeze, pesticides, herbicides, radioactive material, and biohazardous material are not accepted. Regulated waste shall be brought to the DPW Waste Classification Unit, Bldg. 1345, located at 37th and North Ave., phone 288-SNAP, Monday-Friday, 0800-1600, unless otherwise specified in the Contract. **All turn-ins are by appointment only.** Call the DPW Classification Unit to schedule an appointment. The DPW Classification Unit can help contractors with containers, packing procedures, waste classifications, and state notification.

**Asbestos:** Generator manifests must be obtained from the DPW Waste Classification Unit, Bldg. 1345, located at 37th and North Ave, phone 288-SNAP, Monday-Friday, 0800-1600. The transporter must have two

originally signed manifests and then give the landfill 24 hours prior notice, phone 532-2256. Delivery of asbestos containing material (ACM), friable and non-friable, must be made prior to 1200 on the day of delivery.

All ACM must be double bagged, in an enclosed trailer, off-loaded by hand and the driver must have two originally signed manifests. One large bundle is not acceptable due to the possibility of bag breakage upon off-loading and disposal activities. Non-friable ACM that has been damaged or has the potential of being damaged by offloading, grinding, cutting, sanding, disposal or other invasive actions must also be double bagged.

**Special Wastes:** Properly characterized special wastes including fuel (TPH) contaminated soils (<1500 ppm), and demolition debris contaminated with lead paint (TCLP <5.0 mg/L) are allowed in the landfill. Documentation of all characterization tests must be provided to the Fort Hood DPW Waste Classification Unit and the landfill manager a minimum 48 hours prior to delivery of the material to the landfill. The Transporter must have a properly completed manifest at the time of delivery to the landfill. Copies of the Landfill's Waste Acceptance Plan, which contains specific requirements for disposal of the materials may be obtained from DPW Environmental, phone 287-8714; DPW Services, phone 287-9606 or 288-7842; or the Landfill Operating Contractor, phone 532-2256.

The requirements of this clause are not intended to limit the Contractor's rights; the Contractor may dispose of recyclable, salvageable, regulated materials in any lawful manner the Contractor chooses outside of Fort Hood boundaries to the extent allowed by other contract provisions.

#### 1.3.1 Landfill Permit

Contractor shall complete the attached Landfill Permit and give copies, laminated or inserted in page protectors, to drivers so that the drivers could leave them in their trucks. Drivers can just hand the permit over to the scale operator at the landfill rather than having to remember all the information.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

**LANDFILL PERMIT**

US ARMY Corps of Engineers

COE POC and phone: \_\_\_\_\_

Contract name and number: \_\_\_\_\_

Contract completion date or end of authorization date: \_\_\_\_\_

Building or areas affected (i.e., Soldier's Development Center):

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Prime Contractor Name: \_\_\_\_\_

Contractor POC and phone (i.e. someone on site that can get immediate  
action): \_\_\_\_\_

-- End of Section --

SECTION 01410

ENVIRONMENT PROTECTION  
**Amend #0001**

PART 1 GENERAL

1.1 GENERAL REQUIREMENTS

The Contractor shall perform the work minimizing environmental pollution and damage as the result of construction operations. Environmental pollution and damage is the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to humankind; or degrade the utility of the environment for aesthetic, cultural and/or historical purposes. The control of environmental pollution and damage requires consideration of land, water, and air, and includes management of visual aesthetics, noise, solid waste, as well as other pollutants. The environmental resources within the project boundaries and those affected outside the limits of permanent work shall be protected during the entire duration of this contract.

1.1.1 Subcontractors

The Contractor shall ensure compliance with this section by subcontractors.

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1.1.2 Environmental Protection Plan

The Contractor shall submit 2 copies of environmental protection plan within 15 working days after receipt of the notice to proceed. A copy of the Environmental Protection Plan shall be submitted to the Fort Hood PDW Environmental Division (Building No. 4219). Approval of the Contractor's plan will not relieve the Contractor of responsibility for adequate and continuing control of pollutants and other environmental protection measures. The environmental protection plan shall include, but shall not be limited to, the following:

- a. A list of Federal, State, and local laws, regulations, and permits concerning environmental protection, pollution control and abatement that are applicable to the Contractor's proposed operations and the requirements imposed by those laws, regulations, and permits.
- b. Methods for protection of features to be preserved within authorized work areas like trees, shrubs, vines, grasses and ground cover, landscape features, air and water quality, fish and wildlife, soil, historical, archaeological, and cultural resources.
- c. Procedures to be implemented to provide the required environmental protection, to comply with the applicable laws and regulations,

and to correct pollution due to accident, natural causes, or failure to follow the procedures of the environmental protection plan.

- d. Location of the solid waste disposal area.
- e. Drawings showing locations of any proposed temporary excavations or embankments for haul roads, stream crossings, material storage areas, structures, sanitary facilities, and stockpiles of excess or spoil materials.
- f. Environmental monitoring plans for the job site, including land, water, air, and noise monitoring.
- g. Traffic control plan including measures to reduce erosion of temporary roadbeds by construction traffic, especially during wet weather, and the amount of mud transported onto paved public roads by vehicles or runoff.
- h. Methods of protecting surface and ground water during construction activities.
- i. Plan showing the proposed activity in each portion of the work area and identifying the areas of limited use or nonuse. Plan should include measures for marking the limits of use areas.
- j. Drawing of borrow area location. Protection measures required at the work site shall apply to the borrow areas including final restoration for subsequent beneficial use of the land.
- k. A recycling and waste prevention plan with a list of measures to reduce consumption of energy and natural resources; for example: the possibility to shred fallen trees and use them as mulch shall be considered as an alternative to burning or burial.
- l. Not Used.
- m. Training for Contractor's personnel during the construction period.
- n. Spill Prevention Control and Countermeasures Plan which shall include locations and inventory of petroleum products and hazardous materials.
- o. The contractor shall take care not to interfere or detrimentally affect the operation of the air field runway, taxiway or other facilities. Airfield operations must be maintained at all times. Airfield operations can not tolerate typical construction dust and flying debris. The contractor must include in his Demolition Plan and Environmental Protection Plan procedures with intensive control measures to minimize dust and ensure that flying debris is eliminated.

#### 1.1.3 Permits

The Contractor shall obtain all needed permits or licenses. The Government will not obtain any permits for this project; see Contract Clause PERMITS AND RESPONSIBILITIES. The State department of natural resources, through the national pollutant discharge elimination system (NPDES), requires general permits, a notice of intent, and a notice of discontinuation. The Contractor shall be responsible for implementing the terms and requirements of the appropriate permits as needed and for payment of all fees.

#### 1.1.4 Preconstruction Survey

Prior to starting any onsite construction activities, the Contractor and the Contracting Officer shall make a joint condition survey after which the Contractor shall prepare a brief report indicating on a layout plan the condition of trees, shrubs and grassed areas immediately adjacent to work sites and adjacent to the assigned storage area and access routes as applicable. This report will be signed by both the Contracting Officer and the Contractor upon mutual agreement as to its accuracy and completeness.

#### 1.1.5 Meetings

The Contractor shall meet with representatives of the Contracting Officer to alter the environmental protection plan as needed for compliance with the environmental pollution control program.

#### 1.1.6 Notification

The Contracting Officer will notify the Contractor in writing of any observed noncompliance with the previously mentioned Federal, State or local laws or regulations, permits, and other elements of the Contractor's environmental protection plan. The Contractor shall, after receipt of such notice, inform the Contracting Officer of proposed corrective action and take such action when approved. If the Contractor fails to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No time extensions shall be granted or costs or damages allowed to the Contractor for any such suspensions.

#### 1.1.7 Litigation

If work is suspended, delayed, or interrupted due to a court order of competent jurisdiction, the Contracting Officer will determine whether the order is due in any part to the acts or omissions of the Contractor, or subcontractors at any tier, not required by the terms of the contract. If it is determined that the order is not due to Contractor's failing, such suspension, delay, or interruption shall be considered as ordered by the Contracting Officer in the administration of the contract under the contract clause SUSPENSION OF WORK.

#### 1.1.8 Previously Used Equipment

The Contractor shall thoroughly clean all construction equipment previously used at other sites before it is brought into the work areas, ensuring that soil residuals are removed and that egg deposits from plant pests are not

present; the Contractor shall consult with the USDA jurisdictional office for additional cleaning requirements.

#### 1.1.9 Payment

No separate payment will be made for work covered under this section; all costs associated with this section shall be included in the contract unit and/or lump sum prices in the Bidding Schedule.

#### 1.2 SUBMITTALS

In addition to the Environmental Protection Plan specified above in paragraph GENERAL REQUIREMENTS, the following shall be submitted to the Contracting Officer:

##### Storm Water Pollution Prevention Plan

Submit a copy of the Contractor's detailed Storm Water Pollution Prevention Plan (SWPPP) developed in accordance with paragraph 1.3.5 Storm Water Pollution Prevention Plan, specification Section 01420 - BASIC STORM WATER POLLUTION PREVENTION PLAN, and the Environmental Protection Agency's storm water discharge regulations.

##### Hazardous Substance Reporting

The Contractor shall submit a copy of the attached Emergency Planning and Community Right to Know notification and other reports to the Contracting Officer and to the Facility Emergency Coordinator (FEC) as specified in PART 1 paragraph EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW REQUIREMENTS.

#### 1.3 LAND RESOURCES

The Contractor shall confine all activities to areas defined by the drawings and specifications. Prior to the beginning of any construction, the Contractor shall identify the land resources to be preserved within the work area. Except in areas indicated on the drawings or specified to be cleared, the Contractor shall not remove, cut, deface, injure, or destroy land resources including trees, shrubs, vines, grasses, topsoil, and land forms without permission. No ropes, cables, or guys shall be fastened to or attached to any trees for anchorage unless specifically authorized. Where such emergency use is permitted, the Contractor shall provide effective protection for land and vegetation resources at all times as defined in the following subparagraphs. Stone, earth or other material displaced into uncleared areas shall be removed.

##### 1.3.1 Work Area Limits

Prior to any construction, the Contractor shall mark the areas that need not be disturbed under this contract. Isolated areas within the general work area which are to be saved and protected shall also be marked or fenced. Monuments and markers shall be protected before construction operations commence. Where construction operations are to be conducted during darkness, the markers shall be visible. The Contractor's personnel

shall be knowledgeable of the purpose for marking and/or protecting particular objects.

#### 1.3.2 Landscape

Trees, shrubs, vines, grasses, land forms and other landscape features indicated and defined on the drawings to be preserved shall be clearly identified by marking, fencing, or wrapping with boards, or any other approved techniques.

#### 1.3.3 Unprotected Erodible Soils

Earthwork brought to final grade shall be finished as indicated. Side slopes and back slopes shall be protected as soon as practicable upon completion of rough grading. All earthwork shall be planned and conducted to minimize the duration of exposure of unprotected soils. Except in cases where the constructed feature obscures borrow areas, quarries, and waste material areas, these areas shall not initially be totally cleared. Clearing of such areas shall progress in reasonably sized increments as needed to use the developed areas as approved by the Contracting Officer.

#### 1.3.4 Disturbed Areas

The Contractor shall effectively prevent erosion and control sedimentation through approved methods including, but not limited to, the following:

- a. Retardation and control of runoff. Runoff from the construction site or from storms shall be controlled, retarded, and diverted to protected drainage courses by means of diversion ditches, benches, berms, and by any measures required by area wide plans under the Clean Water Act.
- b. Erosion and sedimentation control devices. The Contractor shall construct or install temporary and permanent erosion and sedimentation control features as indicated on the contract SWPPP drawings or as revised drawings by the Contractor as approved by the Contracting Officer Representative (COR). Berms, dikes, drains, sedimentation basins, grassing, and mulching shall be maintained until permanent drainage and erosion control facilities are completed and operative.
- c. Not Used.

#### 1.3.5 Contractor Facilities and Work Areas

The Contractor's field offices, staging areas, stockpile storage, and temporary buildings shall be placed in areas designated on the drawings or as directed by the Contracting Officer. Temporary movement or relocation of Contractor facilities shall be made only when approved. Borrow areas shall be managed to minimize erosion and to prevent sediment from entering nearby waters. Spoil areas shall be managed and controlled to limit spoil intrusion into areas designated on the drawings and to prevent erosion of soil or sediment from entering nearby waters. Spoil areas shall be developed in accordance with the grading plan indicated on the drawings.

Temporary excavation and embankments for plant and/or work areas shall be controlled to protect adjacent areas from despoilment.

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#### 1.3.6 Temporary Excavation and Embankments

If the Contractor proposes to construct temporary roads or embankments and excavations for plant and/or work areas, he shall submit the following for approval at least thirty (30) days prior to scheduled start of such temporary work:

a. A layout of all temporary roads, excavations, and embankments to be constructed within the work area.

b. Details of road construction and stabilization. Stabilization of temporary roads, access drives, and storage yards shall be bituminous treatment only. Re-application of bituminous treatment shall be when traffic has exposed 5% of the surface.

c. Details of the completed quarry or borrow excavation.

d. Plans and cross sections of proposed embankments and their foundations, including a description of proposed materials and methods of embankment stabilization.

e. A landscaping plan prepared by a competent landscape architect showing the proposed restoration of the area. Removal of any necessary trees and shrubs outside the limits of required clearing or quarry, borrow, or waste areas shall be indicated. The plan shall also indicate location of required guard posts or barriers required to control vehicular traffic passing close to trees and shrubs to be maintained undamaged. The plan shall provide for the obliteration of construction scars as such and shall provide for a reasonably natural appearing final condition of the area. Modification of the Contractor's plans shall be made only with the written approval of the Contracting Officer. No unauthorized road construction, excavation or embankment construction (including disposal areas) will be permitted.

f. A revision of the Pollution Prevention Plan to include temporary excavation and embankments.

#### 1.4 WATER RESOURCES

The Contractor shall keep construction activities under surveillance, management, and control to avoid pollution of surface and ground waters. Toxic or hazardous chemicals shall not be applied to soil or vegetation when such application may cause contamination of the fresh water reserve. Monitoring of water areas affected by construction shall be the Contractor's responsibility. All water areas affected by construction activities shall be monitored by the Contractor.

##### 1.4.1 Washing and Curing Water

Waste waters directly derived from construction activities shall not be

allowed to enter water areas. Waste waters shall be collected and placed in retention ponds where suspended material can be settled out or the water evaporates to separate pollutants from the water. Analysis shall be performed and results reviewed and approved before water in retention ponds is discharged.

#### 1.4.2 Not Used

#### 1.4.3 Stream Crossings

Stream crossings shall allow movement of materials or equipment without violating water pollution control standards of the Federal, State or local government.

#### 1.4.4 Fish and Wildlife

The Contractor shall minimize interference with, disturbance to, and damage of fish and wildlife. Species that require specific attention along with measures for their protection shall be listed by the Contractor prior to beginning of construction operations.

#### 1.4.5 Storm Water Pollution Prevention Plan

For project sites greater than 20,230 square meters (5 acres) in size (including all temporary access roads, trailer sites, storage areas, and any other disturbed area associated with the project), the Contractor shall develop a detailed Storm Water Pollution Prevention Plan (SWPPP) and complete a Notice of Intent (NOI) for Storm Water Discharges as required for an NPDES General Permit administered by the Environmental Protection Agency (EPA). The Contractor's detailed SWPPP shall be developed within the guidelines of the basic SWPPP provided as Section 01420 - BASIC STORM WATER POLLUTION PREVENTION PLAN and the Federal Register/Vol.63, No.128, July 6, 1998. The Contractor shall submit his NOI to EPA not later than 48 hours prior to start of work. A dated copy of the Contractor's SWPPP and NOI shall be submitted to the Contracting Officer prior to commencement of construction activities. In addition, the Contractor shall post a copy of the Corps' NOI, the Contractor's NOI, and a brief project description on the project bulletin board. The Storm Water Permit information and NOI shall be posted in a conspicuous place accessible by the public at the entrance to the facility. For the project description, the Contractor may use Section 1.1 of the SWPPP or write a brief description.

#### 1.5 AIR RESOURCES

Equipment operation and activities or processes performed by the Contractor in accomplishing the specified construction shall be in accordance with the State's rules and all Federal emission and performance laws and standards. Ambient Air Quality Standards set by the Environmental Protection Agency shall be maintained. Monitoring of air quality shall be the Contractor's responsibility. All air areas affected by the construction activities shall be monitored by the Contractor.

##### 1.5.1 Particulates

Dust particles; aerosols and gaseous by-products from construction activities; and processing and preparation of materials, such as from asphaltic batch plants; shall be controlled at all times, including weekends, holidays and hours when work is not in progress. The Contractor shall maintain excavations, stockpiles, haul roads, permanent and temporary access roads, plant sites, spoil areas, borrow areas, and other work areas within or outside the project boundaries free from particulates which would cause the air pollution standards to be exceeded or which would cause a hazard or a nuisance. Sprinkling, chemical treatment of an approved type, light bituminous treatment, baghouse, scrubbers, electrostatic precipitators or other methods will be permitted to control particulates in the work area. Sprinkling, to be efficient, must be repeated to keep the disturbed area damp at all times. The Contractor must have sufficient, competent equipment available to accomplish these tasks. Particulate control shall be performed as the work proceeds and whenever a particulate nuisance or hazard occurs.

#### 1.5.1.1 Dust Control

See Section 01562 DUST CONTROL for additional requirements.

#### 1.5.2 Hydrocarbons and Carbon Monoxide

Hydrocarbons and carbon monoxide emissions from equipment shall be controlled to Federal and State allowable limits at all times.

#### 1.5.3 Odors

Odors shall be controlled at all times for all construction activities, processing and preparation of materials.

#### 1.5.4 Sound Intrusions

The Contractor shall keep construction activities under surveillance and control to minimize environment damage by noise. The Contractor shall comply with the provisions of the State of Texas rules.

#### 1.6 WASTE DISPOSAL

Disposal of wastes shall be as specified in Section 02220 DEMOLITION, disposal of regulated material shall be specified as in Sections 02051, 02090, and 13280, respectively and as specified below.

##### 1.6.1 Solid Wastes

Solid wastes (excluding clearing debris) shall be placed in containers which are emptied on a regular schedule. Handling and disposal shall be conducted to prevent contamination. Segregation measures shall be employed so that no hazardous or toxic waste will become co-mingled with solid waste. The Contractor shall transport solid waste off Government property and dispose of it in compliance with Federal, State, and local requirements for solid waste disposal. The Contractor shall comply with Federal, State, and local laws and regulations pertaining to the use of landfill areas (Fort Hood Municipal Landfill, etc.).

#### 1.6.2 Chemical Wastes

Chemicals shall be dispensed ensuring no spillage to ground or water. Periodic inspections of dispensing areas to identify leakage and initiate corrective action shall be performed and documented. This documentation will be periodically reviewed by the Government. Chemical waste shall be collected in corrosion resistant, compatible containers. Collection drums shall be monitored and removed to a staging or storage area when contents are within 150 mm of the top. Wastes shall be disposed of in accordance with Federal and local laws and regulations.

#### 1.6.3 Hazardous Wastes

The Contractor shall take sufficient measures to prevent spillage of hazardous and toxic materials during dispensing and shall collect waste in suitable containers observing compatibility. The Contractor shall transport hazardous waste off Government property and dispose of it in compliance with Federal and local laws and regulations. Spills of hazardous or toxic materials shall be immediately reported to the Contracting Officer. Cleanup and cleanup costs due to spills shall be the Contractor's responsibility.

#### 1.6.4 Burning

Burning will be allowed only if permitted in other sections of the specifications or authorized in writing by the Contracting Officer. The specific time, location, and manner of burning shall be subject to approval. Fires shall be confined to a closed vessel, guarded at all times, and shall be under constant surveillance until they have burned out or have been extinguished. Burning shall be thorough reducing the materials to ashes.

#### 1.7 NOT USED

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#### 1.8 POST CONSTRUCTION CLEANUP

The Contractor shall clean up all areas used for construction.

The Contractor shall obliterate all signs of temporary construction facilities; such as, haul roads, work areas, structures, foundations of temporary structures, stockpiles of excess or waste materials, or any other vestiges of construction, as directed by the Contracting Officer.

It is anticipated that excavation, filling, and plowing of roadways will be required to restore the area to near normal conditions which will permit the growth of vegetation thereon. The disturbed areas shall be graded and filled required, sufficient topsoil shall be spread to - provide a minimum depth of 100-mm (4 inches) of suitable soil for the growth of grass. The entire area seeded, and a uniform perennial vegetative cover with a density of 70 percent established. Restoration to original contours is not required.

#### 1.9 RESTORATION OF LANDSCAPE DAMAGE

The Contractor shall restore landscape features damaged or destroyed during construction operations outside the limits of the approved work areas.

#### 1.10 MAINTENANCE OF POLLUTION FACILITIES

The Contractor shall maintain permanent and temporary pollution control facilities and devices for the duration of the contract or for that length of time construction activities create the particular pollutant.

##### 1.10.1 Storm Water Pollution Prevention Plan

For construction sites covered by a General Permit for Storm Water Discharges, the Contractor's quality control organization shall inspect pollution control structures and activities a minimum of once every seven calendar days and within 24 hours after any storm event of greater than 13 mm (1/2 inch) until final stabilization is achieved. A sample Inspection and Maintenance Report form is included in Section 01420 - BASIC STORM WATER POLLUTION PREVENTION PLAN. An inspection report for each inspection shall be retained on site by the Contractor. In addition, the Contractor shall furnish a copy of each report to the Contracting Officer. When the inspection reveals inadequacies, the pollution prevention measures in the Contractor's Pollution Prevention Plan must be revised and changes implemented within seven days after the inspection. After final stabilization has been achieved, the Contractor shall inspect the site once a month until final inspection and project acceptance by the Corps. After project acceptance, the Contractor shall halt all inspections and shall submit a Notice of Termination (NOT) to EPA for the Contractor's General Permit (see Section 01420 - BASIC STORM WATER POLLUTION PREVENTIN PLAN, PART II, CONTRACTOR COMPLIANCE for an alternate method of submittal).

#### 1.11 TRAINING OF CONTRACTOR PERSONNEL

The Contractor's personnel shall be trained in all phases of environmental protection. The training shall include methods of detecting and avoiding pollution, familiarization with pollution standards, both statutory and contractual, and installation and care of devices, vegetative covers, and instruments required for monitoring purposes to ensure adequate and continuous environmental pollution control.

#### 1.12 EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW REQUIREMENTS

The Contractor shall comply with the requirements of Sections 301 through 312 of the Emergency Planning and Community Right-to-Know Act (EPCRA), also known as Superfund Amendments and Reauthorization Act (SARA) Title III, as published in 40 CFR Part 355. The Contractor shall also comply with all state regulations and procedures which result from EPCRA and the hazard communication program requirements of COE EM 385-1-1. The following planning and reporting requirements involve the Contractor's reporting requirements but are not all inclusive; i.e. transport regulations are not addressed. It is the Contractor's responsibility to comply with all Federal, state, and local emergency planning and reporting requirements.

1.12.1 Definitions and Acronyms

1.12.1.1 CERCLA Hazardous Substance (CHS)

A CERCLA Hazardous Substance (CHS) is any substance listed in Section 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act, also referred to as Superfund; the list of substances also appears in Table 302.4 of 40 CFR 302.

1.12.1.2 Contracting Officer (CO)

For purposes of the Emergency Planning and Community Right-to-Know Act (EPCRA), the Contracting Officer (CO) will be considered the site owner or operator's construction representative.

1.12.1.3 Extremely Hazardous Substance (EHS)

An Extremely Hazardous Substance (EHS) is any substance listed in Appendices A and B of 40 CFR 355.

1.12.1.4 Facility Emergency Coordinator (FEC)

Facility Emergency Coordinator (FEC) is the representative of the facility Owner or Operator. The Contractor shall identify the FEC and notify the FEC as described below each time the Contractor brings a hazardous substance onto the construction site.

1.12.1.5 Hazardous Chemical Substance (HCS)

A Hazardous Chemical Substance (HCS) is any substance defined as hazardous under 29 CFR 1910.1200, with exceptions as listed in 40 CFR 370.2; generally any substance with a Material Safety Data Sheet (MSDS).

1.12.1.6 Reportable Quantity (RQ)

Reportable Quantity (RQ) is a specified minimum amount of a CHS or an EHS which, if released, must be reported immediately to the FEC. The RQ for a CHS is listed in Table 302.4 of 40 CFR 302; the RQ for an EHS is 0.45 kg (1 pound).

1.12.1.7 Threshold Planning Quantity (TPQ)

Threshold Planning Quantity (TPQ) is a specified minimum amount of an EHS which, if brought onto the construction site, must be reported within a stated time to the FEC. The TPQ for an EHS is listed in Appendices A and B of 40 CFR 355 or is the quantity published in state code, whichever is less.

1.12.1.8 Threshold Quantity (TQ)

Threshold Quantity (TQ) is the quantity listed as the Threshold Inventory Quantity for hazardous substances in Title 33 of the Louisiana Administrative Code, Part V, Subpart 2, Chapter 101.

1.12.2 Hazardous Substance Reporting

Whenever a HCS or an EHS substance is brought onto the construction site, the Contractor shall submit the attached reporting form to the FEC, the fire department with jurisdiction over the site, and the Fort Hood DPW Environmental Division (Building No. 4219), and the Contracting Officer as described below:

a. within 5 days for an EHS substance which (1) equals or exceeds its TPQ, or (2) is a solid or liquid weighing 225 kg (500 pounds) or more, whichever is less, or

b. within 10 days for a HCS substance which equals or exceeds 4,500 kg (10,000 pounds) for a solid or 208 liters (55 gallons) for a liquid.

#### 1.12.3 Emergency Release Notification for Listed Hazardous Substances

The Contractor shall immediately notify the FEC and the Contracting Officer if there is a release of an EHS or a CHS substance whose quantity equals or exceeds its RQ.

Notification is also required if the following substances are released into the environment:

a. 2,300 kg (5,000 pounds) or more of any dry solid substance which is an HCS but not an EHS or a CHS,

b. 45 kg (100 pounds) or more of compressed inflammable gas or an inflammable liquid which is an HCS, or

c. 230 kg (500 pounds) or more of any other liquid which is an HCS but not an EHS or CHS.

##### 1.12.3.1 Emergency Notification Information

Emergency notifications shall consist of the following information:

a. The Contractor's name, the name and telephone number of the person making the report, and the name and telephone number of the Contractor's contact person;

b. The chemical name and identification;

c. An estimate of the quantity released;

d. The location of the release;

e. The time and duration of the release;

f. The medium receiving the release (air, land, water);

g. Known acute or chronic health risks;

h. Medical advice when necessary; and

i. Recommended community precautions.

1.12.3.2 Follow-Up Notice

Within 5 days of the release, a written follow-up notice of the release shall be provided to the FEC and the Contracting Officer. The written notice shall update information provided in the initial report, provide detailed information on the response actions taken, and provide advice regarding medical attention necessary for exposed individuals.

1.12.3.3 State EPCRA Agency

The Contractor may call the following agency for information about EPCRA requirements:

Texas Department of Health  
Hazard Communication Branch  
West 49th Street  
Austin, Texas 78756  
Telephone Numbers: 1-800-452-2791 (inside Texas)  
512-834-6603 (outside Texas)

1.13 FORMS

The EMERGENCY PLANNING COMMUNITY RIGHT TO KNOW NOTIFICATION form is attached to the end of this Section.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

-- End of Section --

SECTION 01420

BASIC STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

**Amend #0001**

PART 1 GENERAL

1.1 SUMMARY

This Section provides a basic Stormwater Pollution Prevention Plan (SWPPP) for a National Pollutant Discharge Elimination System (NPDES) General Permit.

1.2 PROJECT IDENTIFICATION AND NOTES

PROJECT TITLE: Fixed Wing Aircraft Park

LOCATION: Fort Hood, TEXAS

NOTE 1: General Permit for Storm Water Discharges from Construction Sites is authorized by the Clean Water Act and is regulated by guidance published in the Federal Register, Volume 63, Number 128, July 6, 1998.

NOTE 2: Under the National Pollutant Discharge Elimination System (NPDES), all construction sites 2.0 hectares (5.0 acres) in size or larger are required to obtain a General Permit for Storm Water Discharges from Construction Sites. Detailed guidance to Storm Water Pollution Prevention Plans (SWPPPs) and Best Management Practices (BMP) is available in the Environmental Protection Agency document EPA-832-R-92-005 titled "Storm Water Management for Construction Activities." NTIS Publication No. Pb9223591 can be purchased through NTIS.

NOTE 3: To fully comply with the regulation, the Fort Worth District (or A/E) project designer and the construction Contractor will each prepare a SWPPP, and file for a separate Notice of Intent (NOI). The construction Contractor shall file the Notice of Termination (NOT) after final site stabilization. The Contractor shall use the basic SWPPP to prepare the Contractor's detailed SWPPP.

1.3 PROJECT DESCRIPTION

This project is located at the Robert Gray Army Airfield, West Fort Hood. Base Bid construction work includes new south airfield parking apron, support buildings and associated site utilities, electrical utilities including manholes for airfield lighting, hydrant fueling system including fuel pipes, fuel drains, leak detection system, etc. The new support facilities include Lighting Vault Building (90048), Air Traffic Control Tower (90140), Fire Station (90145), Fuel Control Building (90150) and Passenger Terminal Building (90155), pallet warehouse, pallet building & scale, high dock, vehicle scales & house, hardstand for vehicle alert

holding area, hardstand for ready load area, fuel/purge station and wash rack, helicopter landing pad, and ammunition loading apron and taxiway.

Construction activities involve establishing storm drainage control; clearing and grubbing; site demolition; grading; concrete and asphalt pavement; fencing; landscaping; excavation, trenching and backfill for utilities; abatement of regulated materials prior to demolition of buildings.

Base Bid includes demolition of Buildings 90079 and 90080, and vehicle scale 90071. Building 90050 will be demolished in Bid Option No.1, and Building 90049 will be demolished in Bid Option No.2. Construction of ammunition loading apron located on the west side of the existing parallel taxiway will be in Bid Option No.4. Clearance of trees to a minimal extent is necessary for construction of ammunition loading apron, associated taxiway and access road, and alert holding area.

The total disturbed areas for Base Bid is approximately 249,850 square meters (sm) or 25 hectares (ha).

The construction areas in the Base Bid are listed in the following: Lighting Vault Building (90048) is approximately 2,250 sm; Air Traffic Control Tower (90140) is approximately 4,800 sm; Fire Station (90145) is approximately 29,400 sm; South Aircraft Apron, Passenger Terminal, high dock, ready load area, and Fuel Control Building are approximately 140,800 sm; pallet warehouse, pallet building & scale, vehicle scales and house are approximately 27,500 sm; alert holding area, fuel/purge station and wash rack are approximately 37,000 sm. Base Bid also includes construction of new electrical utilities (i.e. trenches and manholes) along the runway and taxiways, and mechanical fuel pipes at the existing apron and to the south of it. The total disturbed area is approximately 8,100 sm. The disturbed areas for building demolition (Buildings 90079, 90080, and vehicle scale 90071) are included as one of the construction areas under Base Bid.

The total disturbed area for Bid Option No.1 (Building 90050, Fire Station) is approximately 1,048 sm (or 11,646 square feet). The total disturbed area for Bid Option No.2 (Building 90049, Control Tower and Ops Building) is approximately 2,143 sm (or 23,812 square feet). The total disturbed area for Bid Option No.3 (Runway Approach Lighting System, extending from both ends of the runway) is approximately 1296 sm. The total disturbed area for Bid Option No.4 (ammunition loading pad and taxiway) is approximately 69,300 sm.

The project sites are shown on Project Location Map & Haul Route (sheet no. C-1); Project Location, Haul Route Map II (sheet no. C-2); TOPO SURVEY SHEET 1 (sheet C-4), TOPO SURVEY SHEET 2 (sheet C-5, and TOPO SURVEY SHEET 3 (sheet C-6).

#### 1.4 STANDARD INDUSTRIAL CLASSIFICATION (SIC)

The construction activities associated with this project have the following Standard Industrial Classification (SIC) codes.

- A. 1542 General Contractors - Non-Residential Building, other than Industrial Buildings and warehouses
- B. 1771 Concrete Work (includes asphalt, i.e. access drives and parking lots, culvert construction)
- C. 4581 Airports, Flying Fields, and Airport Terminal Services
- D. 9711 National Security (a general category for military facilities)

## 1.5 LOCATION

The overall project site is located in west Fort Hood, Bell County, Texas. The central location for all new construction (Robert Gray Army Airfield) is at latitude of 31 degrees 02 minutes 15 seconds, and longitude of 97 degrees 48 minutes and 15 seconds. The project site is west of the cantonement area, south of U.S. Highway 190, northeast of Clarke Road (or renamed as New Robert Gray Drive).

The new Lighting Vault Bldg. (90048) is north of Gray Drive, east of exist. Bldg. 90051, and west of exist. Bldg. 90047. The new Air Traffic Control Tower (90140) is south New Robert Gray Drive and Gray Drive intersection and exist. Bldg. 90067. The new Fire Station (90145) is southeast of Gray Drive, west of the existing taxiway and aircraft parking apron. All other new construction discussed in paragraph 1.3 under the Base Bid is at the existing airfield parking apron, and on the west and south sides of the apron. The Base Bid demolition site (buildings 90079, 90080 and vehicle scale 90071) is at the end of Clarke Road (or renamed as New Robert Gray Drive, west of the existing apron).

The demolition sites for Bid Option No.1 (B/90050) and Bid Option No.2 (B/90049) are east of the New Robert Gray Drive and Gray Drive intersection. The Bid Option No.3 construction site is new add-on at both ends of the runway. The Bid Option No.4 (ammunition loading apron) construction site is west of the existing parallel taxiways.

## 1.6 RECEIVING WATERS

Storm drainage from the airfield will outfall to tributaries of Reese Creek, west of the site. They flow east and southeast to Reese Creek, then south to Lampasas River, and eventually into Stillhouse Hollow Lake.

## PART 2 SITE DESCRIPTION

### 2.1 EXISTING CONDITIONS

The existing conditions of each project areas are depicted in TOPO SURVEY SHEET 1 (sheet C-4), TOPO SUREVY SHEET 2 (sheet C-5, and TOPO SURVEY SHEET 3 (sheet C-6).

The new Lighting Vault Bldg. site is adjacent to asphalt areas. It slopes at a 1.5 percent grade to the southeast. A concrete ditch is located southeast of the site. Runoff coefficient (C) is approximately 0.99.

The new Air Traffic Control Tower site has a jogging path, trees and brush and is enclosed by a security fence located to the south. The site has approximately 8 to 9 percent grade. South of the site and away from the security fence, it rises at a 38 percent grade. Site drainage flows north with a runoff coefficient (C) value of approximately 0.60.

An unpaved ditch drains southeast in the middle of the new Fire Station site. The west side and east side of the site slopes at a 4 to 8 percent grade towards the ditch. The site is relatively undeveloped, the runoff coefficient (C) is approximately 0.58.

There are small tributaries of Reese Creek flows south and southeast in close proximity to the west side of the existing airfield parking apron. The apron drops at a 16 percent grade at the edge and slopes at a 10 percent grade towards the creek. Most part of the apron site is paved. Runoff coefficient (C) is approximately 0.21.

The new ammunition loading pad and taxiway site is undeveloped; tree and vegetation occupy this area. Two creeks flow east and southeast through the site. Runoff coefficient (C) is approximately 0.60.

## 2.2 FUTURE CONDITIONS

After construction, storm runoff from the new Lighting Vault Bldg. site will drain southeast at a 5 percent grade around the facility and then east at a 1.7 percent grade to the existing concrete ditch. The C value at the new site Lighting Vault Bldg. will remain at 0.99.

The new Air Traffic Control Tower site will have a 4 percent grade in the north side and 17 to 25 percent grade in the south side of the facility. Access road to the facility will be constructed from the New Robert Gray Drive. Sidewalks will be constructed on the north and east side of the facility. A new storm surface inlet will be constructed west of the facility. Storm runoff is diverted into storm drain pipes to flow north. A portion of the storm runoff is flowing east. The C value at the new Air Traffic Control Tower site will be roughly 0.66.

The new Fire Station site will be 70 percent paved. A significant quantity of fill material is needed for this site. Slope of the paved area will range from 1 to 2 percent grade. Drainage ditches, culverts, storm grates and pipes will be constructed to channel storm flow across the site and outfall to the southeast side. A portion of site runoff will drain southwest and then east in unpaved ditches. The C value at the new Fire Station site will be roughly 0.88.

New paved apron will have a minimum of 0.5 percent and a maximum of 1.5 percent grade. Apron shoulders will be at 2 to 4 percent grade. Sheet flow on the apron will be intercepted by surface inlets and underground storm drain pipes located on the west side of the apron. Storm runoff from the west portion of the apron will drain into a storm pipe, a paved channel and culverts, then outfall through a concrete basin south of the Alert Holding Area, and discharge to the creek. Storm runoff from the east side of the apron will sheet flow into surface inlet, storm drain pipe, and outfall to a concrete basin and weir at the east edge of the apron. New

construction south of the apron (i.e. Alert Holding Area) will have drainage ditches on both north and south sides of the Alert Holding Area. Storm runoff will drain east and southeast, then outfall through a concrete basin located south of the Alert Holding Area, and discharge into the creek. Runoff from the paved area of new construction south of the apron (i.e. fuel control bldg., high dock, ready load area, passenger terminal bldg., pallet warehouse, pallet building and scale, vehicle scales & house) will flow into surface inlets and storm drainage pipes or sheet flow to paved channels, then outfall via culverts on the south or southwest sides to the creek. Runoff coefficient (C) will remain at approximately 0.21.

The new ammunition loading pad and taxiway site will be paved. A significant quantity of fill material is needed for this site. Longitudinal grades will not exceed 3 percent and the transverse grades will crown in the middle with 1.3 percent cross slope. Culverts and storm drain pipe will be constructed to channel the creek flow across the site. Runoff coefficient (C) will be approximately 0.21.

### 2.3 CONSTRUCTION PHASING

New construction is projected to begin, 11 July 2000, and is anticipated to be completed on 11 July 2003.

The sequence of major activities associated with this project are as follows:

- A. Establishment of erosion and sediment structural controls for Base Bid.
- B. Clearing and Grubbing.
- C. Removal, Recycling, or disposal of asbestos, lead-based paint and other regulated material from Base Bid, prior to demolition.
- D. Base Bid Demolition - The Contractor shall review all demolition activities and minimize waste disposal by recycling metallic, glass, wood refrigerants, and other regulated materials, etc.
- E. Grading and Drainage.
- F. Establishment of erosion and sediment structural controls (i.e. perimeter of disturbed areas, new and existing storm grates, excavated trenched materials, etc.) when executing Bid Option No.1 (B/90050, Fire Station), Bid Option No.2 (B/90049, Control Towers & Ops Buildings), Bid Option No.3 (Runway Approach Lighting System), and Bid Option No.4 (Ammunition Loading Pad and Taxiway).
- G. Clearing and Grubbing For Bid Options.
- H. Grading and Drainage for Bid Options.
- I. Removal, Recycling, or disposal of asbestos, lead-based paint and other regulated material from Base Bid items, prior to demolition for Bid Options.

J. Demolition in Bid Options - The Contractor shall review all demolition activities and minimize waste disposal by recycling metallic, glass, wood refrigerants, and other regulated materials, etc.

K. Site Stabilization - Temporary and permanent stabilization shall be established. The structural controls shall be removed only after establishment of permanent stabilization and approval of the Contracting Officer Representative (COR).

The Contractor's detailed SWPPP shall identify all construction phasing activities and demolition activities for Base Bid and Bid Options.

## 2.4 SOILS DATA

The following soils data are from the Soil Survey of Coryell County, Texas, issued in March 1977, by the United States Department of Agriculture, Soil Conservation Service.

This site contains one soil type. The Topsy-Urban land complex association is characterized by deep and gently sloping land with slopes ranging from 3 to 8 percent, with an average of 4 percent. Typically, the surface layer is dark grayish brown clay loam and is approximately 178 millimeters (mm or 7 inches) deep. The subsoil measures approximately 559 mm (or 22 inches) and is grayish brown clay loam containing calcium carbonate concentrations and shale fragments. The underlying material consists of stratified layers of marl and shale. This soil type is generally well drained; however, permeability is moderately slow and occurs at the rate of 15 to 51 mm (0.6 to 2.0 inches) per hour. Availability of water is medium. Runoff is medium to rapid, and erosion is severe. The root zone is easily penetrated by plant roots. Unified Soil Classification of this soil type is C. Potential for shrink-swell is moderate. Soil reaction (pH) ranges from 7.9 to 8.4.

## 2.5 DRAWINGS

The drawings sheet no. H-4 through H-13 are Erosion and Sediment Control Plans 1 through 10. Structural Control details are shown on sheet no. H-14. Base Bid structural controls are depicted on Plans 1 through 7. However, structural controls for electrical and mechanical utilities to be constructed under Base Bid (including electrical utilities on the runway and taxiways, and mechanical hydrant fueling system), and Bid Option No.3 are discussed in the general notes on sheet no. H-5. Structural controls for Bid Options No.1 and No.2 are depicted on Plan 10, and Bid Option No.4 is depicted on Plans 8 and 9.

## PART 3 EROSION AND SEDIMENT CONTROLS

### 3.1 TEMPORARY STABILIZATION

When construction activities cease for periods longer than 14 days, or when there are contract delays in turfing operation and a quick cover is required to prevent erosion, or when seasonal conditions preclude immediate permanent stabilization for the unpaved, graded and disturbed portions of the site as soon as practicable. Section 02940 - MULCHING FOR EROSION

CONTROL provides a recommended method which consists of the following: till the soil to a depth of 101.6 mm (or 4 inches), spread straw or hay mulch at a rate of 0.68 kilograms (kg) per square meter (sm), (or 3 tons per acre), and anchor the mulch into place using a mulch anchoring machine equivalent to a disk harrow with cupped disks removed and replaced with straight rolling coulters spaced not more than 203.2 mm (or 8 inches) apart.

### 3.2 PERMANENT STABILIZATION

The Contractor shall provide permanent stabilization on disturbed and graded areas in no more than 14 days after construction activities have ceased. All unpaved and graded areas within the approximate limit of erosion and sediment control, and disturbed areas resulting from the Contractor's operations shall receive turbing treatment as specified in specification Section 02933 - ESTABLISHMENT OF TURF. The structural controls shall be removed by the Contractor after project completion, final stabilization and approval of COR.

### 3.3 TEMPORARY SEDIMENT BASINS

A temporary sediment basin is not feasible for this project.

### 3.4 STRUCTURAL CONTROLS

The Contractor shall use structural control details on sheet no. H-14 and other applicable structural controls approved by the Contracting Officer Representative (COR) to minimize erosion at each construction area. The Contractor's detailed SWPPP shall identify erosion and sediment control locations and type of structural controls required at each construction area including material borrow (both on-site and off-site), stockpiled, construction entrance and egress, staging, and disposal areas.

## PART 4 STORM WATER MANAGEMENT CONTROLS

### 4.1 RUNOFF COMPUTATIONS

The changes in site conditions after construction will increase storm runoff. Runoff computation shall be based on 10-year storm return frequency, storm duration of 30 minutes, and rainfall intensity of 107 mm (4.2 inches) per hour. The runoff coefficient (C) values of each site are discussed in paragraph 2.2 FUTURE CONDITIONS. Permanent structures such as curbs and gutters, storm drains, drainage ditches, culverts, concrete discharge basin, paved channels will be used in this project to control erosion.

### 4.2 OUTFALL VELOCITY DISSIPATION DEVICES

Velocity dissipation devices (concrete basin and outfall) will be constructed to provide non-erosive flow conditions at the south side of the Alert Holding Area and east edge of the new airfield apron. Concrete head walls will be constructed at the end of the storm drainage pipes along the new construction sites, south of the airfield apron. Culverts will be constructed at the ammunition loading pad, the Air Traffic Control Tower,

and the Fire Station Alert Holding Area sites to minimize erosion.

#### PART 5 BEST MANAGEMENT PRACTICES (BMP) DURING CONSTRUCTION

The Contractor, or its subcontractors, shall be responsible for minimizing pollution of storm runoff. The Contractor shall discuss BMP in detailed SWPPP. They shall comply with the BMP to minimize stormwater pollution.

##### 5.1 WASTE MATERIALS

Solid waste materials (trash and construction debris) shall be placed in covered and appropriate waste containers. Waste containers shall be emptied regularly; they shall not be allowed to overflow. The disposal area of excavated material from project construction shall not be utilized for waste disposal. Routine janitorial service shall be provided for all construction buildings and surrounding grounds. No construction waste materials, including concrete, shall be buried or otherwise disposed on-site. All site personnel shall be briefed on the correct procedures for solid waste disposal.

##### 5.2 HAZARDOUS WASTE

All hazardous waste shall be handled, stored, and disposed in accordance with all Federal, State, and local regulations and prior to all other construction activities. Chemical waste shall be stored in clearly labeled, corrosion-resistant containers, and stored in designated areas before removal from the site. Materials in excess of job requirements shall not be stored on-site. All site personnel shall be briefed on the correct procedures for hazardous waste disposal. All buildings to be demolished under Base Bid, Bid Options No.1, No.2, and No.3 shall require removal of regulated materials. Worker and environmental protection shall be implemented for lead and asbestos abatement per specifications.

##### 5.3 SANITARY WASTE

On-site sanitary facilities shall be established. Facility location, design, maintenance, and waste collection practices shall be in accordance with local regulations. Temporary parking area(s) to be used 30 calendar days or more for the Contractor's equipment or personal vehicles shall be paved with temporary asphalt per specification and it shall be removed by the Contractor upon project completion.

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##### 5.4 OFF-SITE VEHICLE TRACKING AND DUST

The Contractor shall describe practices to keep vehicles from tracking soils from the disturbed areas (i.e. construction entrance /egress, borrow, disposal, stockpiled, excavated trenches and manholes). The Contractor shall describe practices for dust control; (light bituminous treatment in accordance with Section 01410, para 1.3.6.). The Contractor shall describe practices in hauling construction material or debris to avoid loss in the transport (i.e. open-bed vehicles shall be covered or otherwise stabilized).

##### 5.5 FERTILIZERS

If fertilizers are required by the this project, it shall be applied in accordance with the manufacturer's recommendations, in the stated amounts and only when weather conditions are appropriate.

#### 5.6 CONSTRUCTION VEHICLE MAINTENANCE AND REPAIR

Specific areas shall be designated for equipment maintenance and repair to minimize potential impact on storm runoff. Locations shall be chosen to minimize potential impacts on receiving streams and waterways. These locations shall be approved by the Contracting Officer, and structural controls shall be provided. All construction vehicles shall be regularly inspected for leaks and receive regularly scheduled maintenance to reduce the potential for leaks.

#### 5.7 VEHICLE FUELING

Vehicle fueling activities shall be conducted in accordance with good safety practices to reduce the potential for leaks and spills. Only properly constructed fuel containers shall be used on-site and shall be labeled and stored in accordance with applicable Federal, state, and local regulations. If the Contractor constructs a retention basin for storing washing and curing waters, it is the Contractor's responsibility to cleanup and dispose of the contents in the retention basin after project completion.

### PART 6 TIMING OF CONTROLS AND ACTIVITIES.

Temporary and permanent stabilization shall be established as indicated in PART 3 EROSION AND SEDIMENT CONTROLS. The structural controls are required to be in-place prior to start of construction work. Major activities are identified in paragraph 2.3 CONSTRUCTION PHASING. The Contractor shall provide a detailed schedule to implement erosion and sediment control for each construction area.

### PART 7 COMPLIANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS

This project is in compliance with the National Environmental Policy Act of 1969, as amended. The proposed site is located at a traditional non-hazardous location and is classified as Category 1, in accordance with Section 15, Environmental Analysis of DD Form 1391, document No.16496 P, prepared on 25 March 1987 and revised on 19 June 1997. Fort Hood has conducted an historical records search and review including aerial photography, planning, construction documents. Findings have revealed no evidence of environmental contamination. Physical inspection of the site and the vicinity also resulted in negative findings. The record of Environmental Consideration (REC has determined that the action is adequately covered in the existing Environmental Assessment (EA) titled The Remainder of 5 ID from Fort Polk, dated June 1992.

The construction activities renovating the existing runway, taxiways and expanding the current airfield apron will have no impacts to any state or federally listed threatened or endangered species and their habitats. Based on comments from Fort Hood DPW-Environmental at final design review,

site layout has been rearranged to minimize impacts to bird habitats because of demolishing trees at the Alert Holding Area site.

This project site has been further evaluated for historical properties and cultural resources by Dr. Cheryl Huckerby (phone: 254/287-1092 or Dr. Walton, phone: -2633), Fort Hood in February 2000, as a part of the final design review process. Based on the area of potential effect (APE) identified from the project final design document, there are 8 archaeological sites (2 historic and 6 prehistoric) potentially affected. The 2 historic buildings are within the APE but not scheduled for demolition. Fort Hood will prepare the Report on Archeological Sites Affecting Fixed wing Aircraft Park Project for SHPO. It is not anticipated that these sites are eligible for Federal Register. The Contractor shall contact Dr. Huckerby or Dr. Walton to finalize this issue on historical properties and cultural resources in the Contractor's detailed SWPPP.

Army Regulation 200-1 requires that all Department of Defense installations and Contractors shall comply with Federal environmental protection statutes, which include a provision to observe State, and local environmental regulations.

In compliance with the Clean Water Act, this project is above 5.0 acres in size and is required to obtain a National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges from Construction Activities. The Federal Register Notice is published in Volume 63, Number 128, July 6, 1998.

#### PART 8 MAINTENANCE AND INSPECTION PROCEDURES

The Contractor shall conduct routine inspection of erosion and sediment controls established at each construction area. All pollution prevention structural control measures shall be inspected at least once every seven (7) days and within twenty-four (24) hours following any storm producing 150 millimeters (0.5 inches) or more of rainfall. The inspector shall thoroughly understand the requirements of the Contractor's SWPPP and shall have a basic knowledge of the engineering principles for reducing runoff pollution.

Temporary stabilization or grading shall be inspected for erosion and soil loss from the site. Temporary erosion control measures shall be inspected for bare spots and washouts. Discharge points shall be inspected for signs of erosion or sediment. Locations where vehicles enter and leave the site shall be checked for signs of off-site sediment tracking, including erosion control structure at material borrow, disposal, excavated, and stockpiled areas. The Best Management Practices and pollution control maintenance procedures shall be reviewed for adequate erosion control by the Contractor during construction. All deficiencies shall be recorded in the Inspection and Maintenance Report appended herein. The report shall be posted at the project bulletin board and submit to the COR after each inspection. The Contractor shall implement corrections to these problems within seven (7) calendar days and revise the SWPPP as deemed necessary. After final stabilization has been achieved, the Contractor shall inspect the disturbed site once a month until final inspection and project acceptance by the COR.

## PART 9 MATERIAL INVENTORY

All materials or substances brought on-site during construction shall have a Material Safety Data Sheet (MSDS) available to the COR. These materials include concrete, paints, sealants, petroleum-based products, cleaning solvents, fertilizers, tar, asphalt, and steel reinforcing bars. The list of materials shall be stated in the Contractor's detailed SWPPP. Project's phase of work awarded separately will require a separate list of materials.

## PART 10 NON-STORM WATER DISCHARGE

Non-storm water discharge shall not be allowed during construction of the project except for emergency fire-fighting flows and other flows permitted in accordance with 63 FR 128, July 6, 1998. In addition, any spill of a hazardous substance in excess of reporting quantities shall be reported as required under 40 CFR 110. Spill containment, notification, and clean-up in accordance with applicable Federal, state, and local regulations, and to the satisfaction of the COR, shall be required.

## PART 11 CONTRACTOR COMPLIANCE

The Contractor shall use this basic SWPPP to prepare a detailed SWPPP that includes both narrative and drawings (Erosion and Sediment Control Plans). The detailed SWPPP shall state the following as a minimum: (1) the project start and completion dates, (2) bid options to be executed with the project, (3) construction phasing requirements, sequence of construction activities and pollution control measures, (4) discussion of the Best Management Practices (BMP) and implementation during project execution, (5) identify the list of materials brought on-site, (6) runoff computation of each drainage area (see paragraph 4.1), (7) findings on SHPO responses to the Report on Archeological Sites Affecting Fixed Wing Project (see PART 7), and (8) revised stormwater control plans to include all locations that required structural controls (i.e. construction entrance and egress to each site, staging, stockpiled, borrow and disposal areas, concrete basins and outfalls, etc.) and the type of storm control structures for each bid option to be executed.

Being responsible for the daily operations at the construction site and inspection of the established controls in accordance with the NPDES permit requirements. The Contractor shall submit the detailed SWPPP (including the revised Stormwater Control Plans), and a Notice of Intent (NOI) for the Stormwater Discharges Associated with Industrial Activity under NPDES General Permit to EPA. The NOI (EPA Form 3510-6) shall be submitted no later than 48 hours before start of construction. A separate NOI is required for each construction contract or each phase of the construction activities. The mailing address for NOI submittal is:

Stormwater Notice of Intent (4203),  
USEPA, 401 M Street, SW  
Washington, D. C. 20460

The Contractor's detailed SWPPP (including the revised Stormwater Control

Plans) and a copy of submitted NOI shall be provided to the Contracting Officer before start of construction. A copy of the U.S. Army Corps of Engineers NOI (obtained from the Contracting Officer), the Contractor's NOI, and a brief project description shall be posted on the project bulletin board. The Contractor's detailed SWPPP shall be kept on-site at all times. During construction, the Contractor shall perform work as required per paragraph, MAINTENANCE AND INSPECTION PROCEDURES in this section.

No later than 10 working days after acceptance of final stabilization, the Contractor shall submit the Notice of Termination (NOT), EPA Form 3510-7 to EPA. Two copies of the submitted NOT shall be provided to the Contracting Officer's project file. EPA Forms are available on web site at <http://www.epa.gov/earthlr6/6en/w/forms.htm>. It is not required but the Contractor may choose to provide the NOT to the Environmental Division of the Fort Worth District. The Environmental Division shall file both the USACE and Contractor's NOT to EPA to facilitate project closeout. The mailing address for the Contractor's prepared and signed NOT is:

U.S.Army Corps of Engineers  
Attn: CESWF-EV-EE (Dr. H. Jarboe)  
RM 3A14  
819 Taylor Street  
Fort Worth, TX 76102-0300

PART 12 ATTACHMENTS

12.1 OWNER CERTIFICATION

OWNER CERTIFICATION  
FOR  
FIXED WING AIRCRAFT PARK, FORT HOOD, TEXAS

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who managed the system, or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

MICHAEL J. MOCEK, P.E.  
DEPUTY DISTRICT ENGINEER

Date Certified:\_\_\_\_\_

Attachments:

Sheet No.	Title
C-1	PROJECT LOCATION MAP & HAUL ROUTE
C-2	PROJECT LOCATION HAUL ROUTE MAP II
H-4	EROSION AND SEDIMENT CONTROL PLAN 1
H-5	EROSION AND SEDIMENT CONTROL PLAN 2
H-6	EROSION AND SEDIMENT CONTROL PLAN 3
H-7	EROSION AND SEDIMENT CONTROL PLAN 4
H-8	EROSION AND SEDIMENT CONTROL PLAN 5
H-9	EROSION AND SEDIMENT CONTROL PLAN 6
H-10	EROSION AND SEDIMENT CONTROL PLAN 7
H-11	EROSION AND SEDIMENT CONTROL PLAN 8
H-12	EROSION AND SEDIMENT CONTROL PLAN 9
H-13	EROSION AND SEDIMENT CONTROL PLAN 10
H-14	EROSION AND SEDIMENT CONTROL STRUCTURAL DETAILS



12.2 STORMWATER POLLUTION PREVENTION PLAN

STORMWATER POLLUTION PREVENTION PLAN

INSPECTION AND MAINTENANCE REPORT

INSPECTOR: \_\_\_\_\_ DATE: \_\_\_\_\_

INSPECTOR'S  
QUALIFICATION: \_\_\_\_\_

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DAYS SINCE LAST RAINFALL: \_\_\_\_\_ AMOUNT OF LAST RAINFALL: \_\_\_\_\_ INCHES

STABILIZATION MEASURES

AREA	DATE SINCE LAST DISTURBANCE	DATE OF NEXT DISTURBANCE	STABILIZED? (YES/NO?)	STABILIZED WITH	CONDITION
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STABILIZATION REQUIRED:

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STORMWATER POLLUTION PREVENTION PLAN

INSPECTION AND MAINTENANCE REPORT

TO BE PERFORMED BY: \_\_\_\_\_ ON or BEFORE: \_\_\_\_\_

STORMWATER POLLUTION PREVENTION PLAN

INSPECTION AND MAINTENANCE REPORT

OTHER CONTROLS - STABILIZED CONSTRUCTION ENTRANCE

IS MUCH SEDIMENT TRACKED ONTO THE ROAD?	ARE DUST AND SEDIMENT CONTROL MEASURES WORKING?	DOES ALL TRAFFIC USE THE STABILIZED ENTRANCE TO THE SITE?	ARE ASSOCIATED DRAINAGE STRUCTURES WORKING?
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MAINTENANCE REQUIRED FOR CONSTRUCTION ENTRANCE:

TO PERFORMED BY: \_\_\_\_\_ ON OR BEFORE: \_\_\_\_\_

OTHER CONTROLS - DEVELOP SITE SPECIFIC TABLES AS NEEDED

FOR ALL STABILIZATION MEASURES, STRUCTURAL, AND NON-STRUCTURAL CONTROLS  
CHANGES/CORRECTIONS REQUIRED IN POLLUTION PREVENTION PLAN:

REASONS FOR CHANGES:

INSPECTOR'S SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

STORMWATER POLLUTION PREVENTION PLAN

INSPECTION AND MAINTENANCE REPORT

STORMWATER POLLUTION PREVENTION PLAN

INSPECTION AND MAINTENANCE REPORT

MAINTENANCE REQUIRED FOR CONCRETE BASIN(S)& OUTFALLS:

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TO BE PERFORMED BY:\_\_\_\_\_ ON OR BEFORE:\_\_\_\_\_

STRUCTURAL CONTROLS - SILT FENCE(S)

FROM	TO	IS THE BOTTOM OF THE FABRIC STILL BURIED?	IS THE FABRIC IN GOOD CONDITION?	HOW DEEP IS THE SEDIMENT?
<hr/>				

MAINTENANCE REQUIRED FOR THE SILT FENCE (S):

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TO BE PERFORMED BY:\_\_\_\_\_ ON OR BEFORE:\_\_\_\_\_

## STORMWATER POLLUTION PREVENTION PLAN

## INSPECTION AND MAINTENANCE REPORT

## STRUCTURAL CONTROLS - EARTH DIKES(S)

FROM	TO	IS DIKED STABILIZED?	IS THERE EVIDENCE OF WASH-OUT OR OVERTOPPING?
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MAINTENANCE REQUIRED FOR THE EARTH DIKE(S):

TO BE PERFORMED BY: \_\_\_\_\_ ON OR BEFORE: \_\_\_\_\_

-- End of Section --

SECTION 01451

CONTRACTOR QUALITY CONTROL  
**Amend #0001**

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D 3740	(1994a) Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction
ASTM E 329	(1995b) Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction

1.2 PAYMENT

Separate payment will not be made for providing and maintaining an effective Quality Control program, and all costs associated therewith shall be included in the applicable unit prices or lump-sum prices contained in the Bidding Schedule.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS

The Contractor is responsible for quality control and shall establish and maintain an effective quality control system in compliance with the Contract Clause titled "Inspection of Construction." The quality control system shall consist of plans, procedures, and organization necessary to produce an end product which complies with the contract requirements. The system shall cover all construction operations, both onsite and offsite, and shall be keyed to the proposed construction sequence. The project superintendent will be held responsible for the quality of work on the job and is subject to removal by the Contracting Officer for non-compliance with quality requirements specified in the contract. The project superintendent in this context shall mean the individual with the responsibility for the overall management of the project including quality and production.

### 3.2 QUALITY CONTROL PLAN

#### 3.2.1 General

The Contractor shall furnish for review by the Government, not later than 10 days after receipt of notice to proceed, the Contractor Quality Control (CQC) Plan proposed to implement the requirements of the Contract Clause titled "Inspection of Construction." The plan shall identify personnel, procedures, control, instructions, tests, records, and forms to be used. The Government will consider an interim plan for the first 60 days of operation. Construction will be permitted to begin only after acceptance of the CQC Plan or acceptance of an interim plan applicable to the particular feature of work to be started. Work outside of the features of work included in an accepted interim plan will not be permitted to begin until acceptance of a CQC Plan or another interim plan containing the additional features of work to be started.

#### 3.2.2 Content of the CQC Plan

The CQC Plan shall include, as a minimum, the following to cover all construction operations, both onsite and offsite, including work by subcontractors, fabricators, suppliers, and purchasing agents:

- a. A description of the quality control organization, including a chart showing lines of authority and acknowledgment that the CQC staff shall implement the three phase control system for all aspects of the work specified. The staff shall include a CQC System Manager who shall report to the project superintendent.
- b. The name, qualifications (in resume format), duties, responsibilities, and authorities of each person assigned a CQC function.
- c. A copy of the letter to the CQC System Manager signed by an authorized official of the firm which describes the responsibilities and delegates sufficient authorities to adequately perform the functions of the CQC System Manager, including authority to stop work which is not in compliance with the contract. The CQC System Manager shall issue letters of direction to all other various quality control representatives outlining duties, authorities, and responsibilities. Copies of these letters shall also be furnished to the Government.
- d. Procedures for scheduling, reviewing, certifying, and managing submittals, including those of subcontractors, offsite fabricators, suppliers, and purchasing agents. These procedures shall be in accordance with Section 01330 SUBMITTAL PROCEDURES.
- e. Control, verification, and acceptance testing procedures for each specific test to include the test name, specification paragraph requiring test, feature of work to be tested, test frequency, and person responsible for each test. (Laboratory facilities will be approved by the Contracting Officer.)

- f. Procedures for tracking preparatory, initial, and follow-up control phases and control, verification, and acceptance tests including documentation.
- g. Procedures for tracking construction deficiencies from identification through acceptable corrective action. These procedures shall establish verification that identified deficiencies have been corrected.
- h. Reporting procedures, including proposed reporting formats.
- i. A list of the definable features of work. A definable feature of work is a task which is separate and distinct from other tasks, has separate control requirements, and may be identified by different trades or disciplines, or it may be work by the same trade in a different environment. Although each section of the specifications may generally be considered as a definable feature of work, there are frequently more than one definable features under a particular section. This list will be agreed upon during the coordination meeting.

### 3.2.3 Acceptance of Plan

Acceptance of the Contractor's plan is required prior to the start of construction. Acceptance is conditional and will be predicated on satisfactory performance during the construction. The Government reserves the right to require the Contractor to make changes in his CQC Plan and operations including removal of personnel, as necessary, to obtain the quality specified.

### 3.2.4 Notification of Changes

After acceptance of the CQC Plan, the Contractor shall notify the Contracting Officer in writing of any proposed change. Proposed changes are subject to acceptance by the Contracting Officer.

## 3.3 COORDINATION MEETING

After the Preconstruction Conference, before start of construction, and prior to acceptance by the Government of the CQC Plan, the Contractor shall meet with the Contracting Officer or Authorized Representative and discuss the Contractor's quality control system. The CQC Plan shall be submitted for review a minimum of 5 calendar days prior to the Coordination Meeting. During the meeting, a mutual understanding of the system details shall be developed, including the forms for recording the CQC operations, control activities, testing, administration of the system for both onsite and offsite work, and the interrelationship of Contractor's Management and control with the Government's Quality Assurance. Minutes of the meeting shall be prepared by the Government and signed by both the Contractor and the Contracting Officer. The minutes shall become a part of the contract file. There may be occasions when subsequent conferences will be called by either party to reconfirm mutual understandings and/or address deficiencies in the CQC system or procedures which may require corrective action by the Contractor.

### 3.4 QUALITY CONTROL ORGANIZATION

Amend #0001

#### 3.4.1 Personnel Requirements

The requirements for the CQC organization are a CQC System Manager and sufficient number of additional qualified personnel to ensure contract compliance. The Contractor shall provide a CQC organization which shall be at the site at all times during progress of the work and with complete authority to take any action necessary to ensure compliance with the contract. All CQC staff members shall be subject to acceptance by the Contracting Officer. In addition to the CQC System Manager and the Submittals Clerk, the CQC organization shall consist of no less than three full time quality control personnel for the entire life of the contract . Their responsibility is to provide continuous inspection of the work and insure compliance with the contract plans and specifications. These individuals shall not perform other duties other than quality control duties as described in the Quality Control Plan.

Amend #0001

#### 3.4.2 CQC System Manager

The Contractor shall identify as CQC System Manager an individual within the onsite work organization who shall be responsible for overall management of CQC and have the authority to act in all CQC matters for the Contractor. The CQC System Manager shall be a graduate engineer, graduate architect, or a graduate of construction management, with a minimum of 10 years construction experience on construction similar to this contract or a construction person with a minimum of fifteen (15) years in related work. This CQC System Manager shall be on the site at all times during construction and shall be employed by the prime Contractor. The CQC System Manager shall be assigned no other duties. An alternate for the CQC System Manager shall be identified in the plan to serve in the event of the System Manager's absence. The requirements for the alternate shall be the same as for the designated CQC System Manager.

#### 3.4.3 CQC Personnel

Amend #0001

##### 3.4.3.1 CQC Staff

A staff shall be maintained under the direction of the CQC system manager to perform all QC activities. The staff must be of sufficient size to ensure adequate QC coverage of all work phases, work shifts and work crews involved with the construction. These personnel shall NOT perform other duties and must be fully qualified by experience and technical training to perform their assigned QC responsibilities and must be allowed sufficient time to carry out these responsibilities.

Amend #0001

##### 3.4.3.2 Specialized CQC Personnel

In addition to CQC personnel specified elsewhere in the contract, the

Contractor shall provide as part of the CQC organization specialized personnel to assist the CQC System Manager for the following areas: Mechanical, electrical, submittal clerk, fire alarm, and fire sprinkler systems. These individuals shall be directly employed by the Prime Contractor; be responsible to the CQC System Manager; be physically present at the construction site during work on their areas of responsibility; have the necessary education and/or experience.

a. Mechanical - Graduate Mechanical Engineer with 4 years experience or a highly qualified technician with 8 years related mechanical installation experience in HVAC, Controls, HVAC Commissioning, Plumbing and Fuel Piping Systems. The specialized mechanical QC shall commence duties full time (40 hrs/week) at the Notice to Proceed date and continue until final completion date or until correction of the all mechanical deficiencies, whichever is later.

(1) The mechanical QC shall be responsible for all mechanical inspections, startups and commissioning of all buildings.

(2) An additional supplemental fuel piping QC may be required in addition to the QC mechanical for the duration of the fuel piping work.

b. Submittal Clerk - Experience with RMS and 1 year previous experience as submittal clerk. The Submittal Clerk shall commence duties full time (40 hrs/week) at the Notice to Proceed date and continue until the submittal register is completely cleared after final submission and approval of all submittals.

c. Fire Alarm - NICET Level III fire alarm certificate or person with 5 years experience in the installation of fire alarm systems in buildings. The specialized fire alarm QC shall not have been employed by the fire alarm subcontractor in the previous two years. The specialized fire alarm QC shall submit a report before the QC test showing that he has tested the system in accordance with all requirements of NFPA 72, and that the fire alarm system meets all contract requirements.

d. Fire Sprinkler Systems - Graduate Mechanical Engineer with 2 years experience or NICET Level III, fire sprinkler certificate. The specialized fire sprinkler QC shall not have been employed by the fire sprinkler subcontractor in the previous two years. The specialized fire sprinkler QC shall perform three tests of the fire sprinkler systems fully connected to the fire alarm system. Each test shall be conducted per NFPA 13 and NFPA 72, shall not have any deficiencies and shall be conducted in the presence of the Contracting Officer, and finally shall be conducted as scheduled by the Contracting Officer.

e. The electrical QC person shall be a licensed electrical engineer with 4 years verifiable construction experience or a highly qualified technician with 8 years experience in electronic building controls, interior and exterior electrical power systems and with at least 2 years experience specifically with runway lighting and controls. The electrical QC person shall be responsible for the interior and exterior electrical inspections and commissioning for all phases of construction. The specialized electrical QC person shall commence duties full time (40 hrs/week) at the Notice to Proceed

date and continue until final completion date or until correction of the all electrical deficiencies, whichever is later.

f. The site work QC person shall be ACI Level I certified. The site work must be a licensed civil engineer with 6 years verifiable construction experience or QC person shall be a highly a qualified technician with 10 years of verifiable construction experience of roads, parking areas, and the installation of earth fills. The site work QC person shall have experience in the construction of underground storm drainage and in the installation of gas and water underground utilities. The site work QC shall be responsible for all inspections of the offsite underground utilities and road and airfield concrete and asphalt paving work. The specialized site work QC person shall commence duties full time (40 hrs/week) at the Notice to Proceed date and continue until final completion date or until correction of the all site work deficiencies, whichever is later.

Amend #0001

#### 3.4.3.3 QC Personnel

Except for the submittals clerk, all Quality Control personnel shall be paid a weekly salary not less than a 40-hour work week for the highest paid skilled craft plus benefits shown on the wage rate schedule.

#### 3.4.4 Additional Requirement

In addition to the above experience and education requirements the CQC System Manager shall have completed the course entitled "Construction Quality Management For Contractors". This course is periodically offered at the Fort Worth District, Corps of Engineers Office, Federal Building, Room 1A03, 819 Taylor Street, Fort Worth, Texas. Attendees must be fluent in the English language (able to read and write) at the high school level. It will be offered at the following times:

Registration is required; call (817) 978-9998 or (817) 978-3870 for times and reservations. Each class will be limited to 30 students. If the demand is greater than what is currently scheduled, additional classes will be scheduled.

#### 3.4.5 Organizational Changes

The Contractor shall maintain the CQC staff at full strength at all times. When it is necessary to make changes to the CQC staff, the Contractor shall revise the CQC Plan to reflect the changes and submit the changes to the Contracting Officer for acceptance.

#### 3.5 SUBMITTALS AND DELIVERIES

Submittals, if needed, shall be made as specified in Section 01330 SUBMITTAL PROCEDURES. The CQC organization shall be responsible for certifying that all submittals and deliverables are in compliance with the contract requirements.

#### 3.6 CONTROL

Contractor Quality Control is the means by which the Contractor ensures

that the construction, to include that of subcontractors and suppliers, complies with the requirements of the contract. At least three phases of control shall be conducted by the CQC System Manager for each definable feature of work as follows:

### 3.6.1 Preparatory Phase

This phase shall be performed prior to beginning work on each definable feature of work, after all required plans/documents/materials are approved/accepted, and after copies are at the work site. This phase shall include:

- a. A review of each paragraph of applicable specifications, reference codes, and standards. A copy of those sections of referenced codes and standards applicable to that portion of the work to be accomplished in the field shall be made available by the Contractor at the preparatory inspection. These copies shall be maintained in the field and available for use by Government personnel until final acceptance of the work.
- b. A review of the contract drawings.
- c. A check to assure that all materials and/or equipment have been tested, submitted, and approved. (Only coded A or B shop drawing submittals will be considered "as approved." Submittals other than those coded A or B required to be resubmitted will delay the preparatory phase meeting until they have been resubmitted and approved.)
- d. Review of provisions that have been made to provide required control inspection and testing.
- e. Examination of the work area to assure that all required preliminary work has been completed and is in compliance with the contract.
- f. A physical examination of required materials, equipment, and sample work to assure that they are on hand, conform to approved shop drawings or submitted data, and are properly stored.
- g. A review of the appropriate activity hazard analysis to assure safety requirements are met.
- h. Discussion of procedures for controlling quality of the work including repetitive deficiencies. Document construction tolerances and workmanship standards for that feature of work.
- i. A check to ensure that the portion of the plan for the work to be performed has been accepted by the Contracting Officer.
- j. Discussion of the initial control phase.
- k. The Government shall be notified at least 72 hours in advance of beginning the preparatory control phase. This phase shall include

a meeting conducted by the CQC System Manager and attended by the superintendent, other CQC personnel (as applicable), and the foreman responsible for the definable feature. The results of the preparatory phase actions shall be documented by separate minutes prepared by the CQC System Manager and attached to the daily CQC report. The Contractor shall instruct applicable workers as to the acceptable level of workmanship required in order to meet contract specifications.

Amend #0001

1. The contractor shall ensure that all FIO Submittals have been submitted no less than 14 calendar days prior to scheduling a Preparatory inspection. GA Submittals must be submitted and approved in accordance with Specification Section 01330 prior to scheduling a Preparatory Inspection.

3.6.2 Initial Phase

This phase shall be accomplished at the beginning of a definable feature of work. The following shall be accomplished:

- a. A check of work to ensure that it is in full compliance with contract requirements. Review minutes of the preparatory meeting.
- b. Verify adequacy of controls to ensure full contract compliance. Verify required control inspection and testing.
- c. Establish level of workmanship and verify that it meets minimum acceptable workmanship standards. Compare with required sample panels as appropriate.
- d. Resolve all differences.
- e. Check safety to include compliance with and upgrading of the safety plan and activity hazard analysis. Review the activity analysis with each worker.
- f. The Government shall be notified at least 24 hours in advance of beginning the initial phase. Separate minutes of this phase shall be prepared by the CQC System Manager and attached to the daily CQC report. Exact location of initial phase shall be indicated for future reference and comparison with follow-up phases.
- g. The initial phase should be repeated for each new crew to work onsite, or any time acceptable specified quality standards are not being met.

3.6.3 Follow-up Phase

Daily checks shall be performed to assure control activities, including control testing, are providing continued compliance with contract requirements, until completion of the particular feature of work. The checks shall be made a matter of record in the CQC documentation. Final follow-up checks shall be conducted and all deficiencies corrected prior to the start of additional features of work which may be affected by the

deficient work. The Contractor shall not build upon nor conceal non-conforming work.

### 3.6.4 Additional Preparatory and Initial Phases

Additional preparatory and initial phases shall be conducted on the same definable features of work if : the quality of on-going work is unacceptable; if there are changes in the applicable CQC staff, onsite production supervision or work crew; if work on a definable feature is resumed after a substantial period of inactivity; or if other problems develop.

## 3.7 TESTS

### 3.7.1 Testing Procedure

The Contractor shall perform specified or required tests to verify that control measures are adequate to provide a product which conforms to contract requirements. Upon request, the Contractor shall furnish to the Government duplicate samples of test specimens for possible testing by the Government. Testing includes operation and/or acceptance tests when specified. The Contractor shall procure the services of a Corps of Engineers approved testing laboratory or establish an approved testing laboratory at the project site. The Contractor shall perform the following activities and record and provide the following data:

- a. Verify that testing procedures comply with contract requirements.
- b. Verify that facilities and testing equipment are available and comply with testing standards.
- c. Check test instrument calibration data against certified standards.
- d. Verify that recording forms and test identification control number system, including all of the test documentation requirements, have been prepared.
- e. Results of all tests taken, both passing and failing tests, shall be recorded on the CQC report for the date taken. Specification paragraph reference, location where tests were taken, and the sequential control number identifying the test shall be given. If approved by the Contracting Officer, actual test reports may be submitted later with a reference to the test number and date taken. An information copy of tests performed by an offsite or commercial test facility shall be provided directly to the Contracting Officer. Failure to submit timely test reports as stated may result in nonpayment for related work performed and disapproval of the test facility for this contract.

### 3.7.2 Testing Laboratories

#### 3.7.2.1 Capability Check

The Government reserves the right to check laboratory equipment in the

proposed laboratory for compliance with the standards set forth in the contract specifications and to check the laboratory technician's testing procedures and techniques. Laboratories utilized for testing soils, concrete, asphalt, and steel shall meet criteria detailed in ASTM D 3740 and ASTM E 329.

#### 3.7.2.2 Capability Recheck

If the selected laboratory fails the capability check, the Contractor will be assessed a charge of \$2,000 to reimburse the Government for each succeeding recheck of the laboratory or the checking of a subsequently selected laboratory. Such costs will be deducted from the contract amount due the Contractor.

#### 3.7.3 Onsite Laboratory

The Government reserves the right to utilize the Contractor's control testing laboratory and equipment to make assurance tests, and to check the Contractor's testing procedures, techniques, and test results at no additional cost to the Government.

#### Amend #0001

The Contractor shall provide a separate on-site full time testing laboratory capable of performing and reporting all specified tests called for in Division 2 - Site Work and Division 2 - Concrete. The testing laboratory shall be under the direction of the CQC System Manager.

Full time testing and control will be provided at the concrete batch plant for testing required in Divisions 2 and 3. The Contractor shall submit laboratory personnel qualifications for approval prior to start of any work. A minimum of 3 laboratory technicians shall be in the field taking tests at the construction peak. (These technicians are not considered in the minimum number of Quality Control staff addressed in paragraph 3.4.1 above.) The laboratory will be inspected prior to any work to insure necessary equipment items are provided in good working order. Commercial laboratories involved in testing will meet appropriate requirements as stated in ASTM E329, ASTM D3740 and ASTM C1077. The sole purpose of said laboratory will be to monitor and perform all necessary tests and re-tests for this contract to insure contract compliance.

#### 3.7.4 Furnishing of Transportation of Samples for Testing

Costs incidental to the transportation of samples or materials shall be borne by the Contractor. Samples of materials for test verification and acceptance testing by the Government shall be delivered to the Government-contract laboratory designated by the Area Office.

Coordination for each specific test, exact delivery location, and dates will be made through the Area Office.

#### 3.8 COMPLETION INSPECTION

##### 3.8.1 Punch-Out Inspection

Near the end of the work, or any increment of the work established by a time stated in the Special Contract Requirement Clause, "Commencement, Prosecution, and Completion of Work", or by the specifications, the CQC Manager shall conduct an inspection of the work. A punch list of items which do not conform to the approved drawings and specifications shall be prepared and included in the CQC documentation, as required by paragraph DOCUMENTATION. The list of deficiencies shall include the estimated date by which the deficiencies will be corrected. The CQC System Manager or staff shall make a second inspection to ascertain that all deficiencies have been corrected. Once this is accomplished, the Contractor shall notify the Government that the facility is ready for the Government Pre-Final inspection.

### 3.8.2 Pre-Final Inspection

The Government will perform the pre-final inspection to verify that the facility is complete and ready to be occupied. A Government Pre-Final Punch List may be developed as a result of this inspection. The Contractor's CQC System Manager shall ensure that all items on this list have been corrected before notifying the Government, so that a Final inspection with the customer can be scheduled. Any items noted on the Pre-Final inspection shall be corrected in a timely manner. These inspections and any deficiency corrections required by this paragraph shall be accomplished within the time slated for completion of the entire work or any particular increment of the work if the project is divided into increments by separate completion dates.

### 3.8.3 Final Acceptance Inspection

The Contractor's Quality Control Inspection personnel, plus the superintendent or other primary management person, and the Contracting Officer's Representative shall be in attendance at the final acceptance inspection. Additional Government personnel including, but not limited to, those from Base/Post Civil Facility Engineer user groups, and major commands may also be in attendance. The final acceptance inspection will be formally scheduled by the Contracting Officer based upon results of the Pre-Final inspection. Notice shall be given to the Contracting Officer at least 14 days prior to the final acceptance inspection and shall include the Contractor's assurance that all specific items previously identified to the Contractor as being unacceptable, along with all remaining work performed under the contract, will be complete and acceptable by the date scheduled for the final acceptance inspection. Failure of the Contractor to have all contract work acceptably complete for this inspection will be cause for the Contracting Officer to bill the Contractor for the Government's additional inspection cost in accordance with the contract clause titled "Inspection of Construction".

### 3.9 DOCUMENTATION

The Contractor shall maintain current records providing factual evidence that required quality control activities and/or tests have been performed. These records shall include the work of subcontractors and suppliers and shall be on an acceptable form that includes, as a minimum, the following information:

- a. Contractor/subcontractor and their area of responsibility.
- b. Operating plant/equipment with hours worked, idle, or down for repair.
- c. Work performed each day, giving location, description, and by whom. When Network Analysis (NAS) is used, identify each phase of work performed each day by NAS activity number.
- d. Test and/or control activities performed with results and references to specifications/drawings requirements. The control phase shall be identified (Preparatory, Initial, Follow-up). List of deficiencies noted, along with corrective action.
- e. Quantity of materials received at the site with statement as to acceptability, storage, and reference to specifications/drawings requirements.
- f. Submittals and deliverables reviewed, with contract reference, by whom, and action taken.
- g. Off-site surveillance activities, including actions taken.
- h. Job safety evaluations stating what was checked, results, and instructions or corrective actions.
- i. Instructions given/received and conflicts in plans and/or specifications.
- j. Contractor's verification statement.

## Amend #0001

k. An RFI log with the following information minimum: number, date submitted, short description, suspense date, poc, spec reference, location/area/building, and date answered.

l. Master Deficiency list with the following minimum information: deficiency number, description of deficiency, date reported, contractor poc, date cleared, QA who cleared it, and synopsis of correction.

m. Preparatory & Initial Inspection Tracking Log with the following minimum information for each activity/phase of construction: Specification Section, subcontractor, inspection date notice to the Government, date of Preparatory inspection, date of Initial inspection

These records shall indicate a description of trades working on the project; the number of personnel working; weather conditions encountered; and any delays encountered. These records shall cover both conforming and deficient features and shall include a statement that equipment and materials incorporated in the work and workmanship comply with the contract. The original and one copy of these records in report form shall be furnished to the Government daily within 24 hours after the date covered by the report, except that reports need not be submitted for days on which

no work is performed. As a minimum, one report shall be prepared and submitted for every 7 days of no work and on the last day of a no work period. All calendar days shall be accounted for throughout the life of the contract. The first report following a day of no work shall be for that day only. Reports shall be signed and dated by the CQC System Manager. The report from the CQC System Manager shall include copies of test reports and copies of reports prepared by all subordinate quality control personnel.

### 3.10 SAMPLE FORMS

a. Minimum construction quality control report and the required preparatory and initial inspection documentation.

b. All tests of piping systems or portions thereof shall be recorded on the "Piping System Test Report".

c. Built-up roofing operations, including materials used, shall be reported on "CONTRACTOR'S INSPECTOR ROOFING CHECK LIST AND TEST REPORT."

d. Maintain current records of drilled pier construction and furnish to the Contracting Officer on a weekly basis detailed reports recorded on SWF Form 1175-J, "Construction Record Drilled Piers".

e. When operation and maintenance instructions for equipment are furnished to Government representatives by the Contractor, the Contractor's representative shall record on a form similar to that attached hereto the applicable data, including the name, organization, and signature of each person attending the instructions.

### 3.11 NOTIFICATION OF NONCOMPLIANCE

The Contracting Officer will notify the Contractor of any detected noncompliance with the foregoing requirements. The Contractor shall take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the work site, shall be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

### SAMPLE FORMS

Sample QC forms follow this page.

(Sample of typical Contractor Quality Control Report)

CONTRACTOR'S NAME  
(Address)

DAILY CONSTRUCTION QUALITY CONTROL REPORT

Date: \_\_\_\_\_ Report No. \_\_\_\_\_

Contract

No.: \_\_\_\_\_

Description and Location of work:

\_\_\_\_\_  
\_\_\_\_\_

WEATHER: (Clear) (P. Cloudy) (Cloudy);  
Temperature: \_\_\_\_\_ Min. \_\_\_\_\_ Max;  
Rainfall \_\_\_\_\_ inches.

Contractor/Subcontractors and Area of Responsibility with Labor Count for Each

a. \_\_\_\_\_

b. \_\_\_\_\_

c. \_\_\_\_\_

d. \_\_\_\_\_

Equipment Data: (Indicate items of construction equipment, other than hand tools, at the job site, and whether or not used.)

\_\_\_\_\_  
\_\_\_\_\_

1. Work Performed Today: (Indicate location and description of work performed. Refer to work performed by prime and/or subcontractors by letter in Table above. If no work is performed, report the reason.)

\_\_\_\_\_  
\_\_\_\_\_

2. Results of Surveillance: (Include satisfactory work completed, or deficiencies with action to be taken.)

a. Preparatory Inspection:

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b. Initial Inspection:

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c. Follow-up Inspections:

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3. Test Required by Plans and/or Specifications performed and Results of Tests:

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4. Verbal Instructions Received: (List any instructions given by Government personnel on construction deficiencies, retesting required, etc., with action to be taken.)

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5. Remarks: (Cover any conflicts in plans, specifications, or instructions or any delay to the job.)

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6. Results of Safety Inspection: (Include safety violations and corrective actions taken.)

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Contractor's Inspector

Page 1

CONTRACTOR'S VERIFICATION: The above report is complete and correct and all material and equipment used and work performed during this reporting period are in compliance with the contract plans and specifications except as noted above.

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Contractor's Chief of Quality Control

NOTE:

DO NOT LEAVE REPORT ITEMS BLANK

Items 1. through 6. must be reported every day. If there is no other report on an item, enter the work "none" in the reporting space. Reports with items left blank will be returned as incomplete.

Page 2

PREPARATORY PHASE CHECKLIST

Contract No. \_\_\_\_\_ Date: \_\_\_\_\_

Definable Feature: \_\_\_\_\_ Spec Section: \_\_\_\_\_

Gov't Rep Notified \_\_\_\_\_ Hours in Advance Yes \_\_\_\_\_ No \_\_\_\_\_

I. Personnel Present:

Name	Position	Company/Government
1. _____		
2. _____		
3. _____		
4. _____		
5. _____		
6. _____		
7. _____		
8. _____		
9. _____		
10. _____		

(List additional personnel on reverse side)

II. Submittals

1. Review submittals and/or submittal log 4288.  
Have all submittals been approved? Yes \_\_\_\_\_ No \_\_\_\_\_

If no, what items have not been submitted?

a. \_\_\_\_\_  
\_\_\_\_\_  
b. \_\_\_\_\_  
\_\_\_\_\_  
c. \_\_\_\_\_  
\_\_\_\_\_

2. Are all materials on hand? Yes\_\_\_\_\_ No\_\_\_\_\_

If no, what items are missing?

a. \_\_\_\_\_

b. \_\_\_\_\_

c. \_\_\_\_\_

3. Check approved submittals against delivered materials. (This should be done as material arrives.)

Comments \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

### III. Material storage

Are materials stored properly? Yes\_\_\_\_\_ No \_\_\_\_\_

If No, what action is taken? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

### IV. Specifications

1. Review each paragraph of specifications.

\_\_\_\_\_

\_\_\_\_\_

2. Discuss procedure for accomplishing the work.

\_\_\_\_\_

\_\_\_\_\_

3. Clarify any differences.

\_\_\_\_\_

\_\_\_\_\_

### V. Preliminary Work and Permits

Ensure preliminary work is correct and permits are on file.

If not, what action is taken? \_\_\_\_\_

\_\_\_\_\_



VI. Testing

1. Identify test to be performed, frequency, and by whom.

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2. When required?

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3. Where required?

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4. Reviewing Testing Plan.

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5. Have test facilities been approved?

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VII. Safety

1. Review applicable portion of EM 385-1-1.

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2. Activity Hazard Analysis approved? Yes \_\_\_\_\_ No \_\_\_\_\_

VIII. Corps of Engineers comments during meeting.

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\_\_\_\_\_  
CQC REP

PPC Page 3



INITIAL PHASE CHECKLIST

Contract No. \_\_\_\_\_ Date: \_\_\_\_\_

Definable Feature: \_\_\_\_\_

Gov't Rep Notified \_\_\_\_\_ Hours in Advance Yes \_\_\_\_\_ No \_\_\_\_\_

I. Personnel Present:

	Name	Position	Company/Government
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____
5.	_____	_____	_____
6.	_____	_____	_____
7.	_____	_____	_____
8.	_____	_____	_____
9.	_____	_____	_____
10.	_____	_____	_____

(List additional personnel on reverse side)

IC Page 1

II.

Identify full compliance with procedures identified at preparatory.  
Coordinate plans, specifications, and submittals.

Comments

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III. Preliminary Work. Ensure preliminary work is complete and correct.  
If not, what action is taken?

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IV. Establish Level of Workmanship.

1. Where is work located?\_\_\_\_\_

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2. Is a sample panel required? Yes \_\_\_\_\_ No \_\_\_\_\_

3. Will the initial work be considered as a sample?

Yes \_\_\_\_\_ No \_\_\_\_\_

(If yes, maintain in present condition as long as possible.)

V. Resolve any differences.

Comments

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IC Page 2

VI. Check Safety

Review job conditions using EM 385-1-1 and job hazard analysis.

Comments\_\_\_\_\_

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\_\_\_\_\_  
CQC REP

IC Page 3

PIPING SYSTEM TEST REPORT

STRUCTURE OR BUILDING\_\_\_\_\_

CONTRACT NO. \_\_\_\_\_

DESCRIPTION OF SYSTEM OR PART OF SYSTEM TESTED: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

DESCRIPTION OF TEST: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

NAME AND TITLE OF PERSON IN CHARGE OF PERFORMING TESTS FOR CONTRACTOR:

NAME \_\_\_\_\_

TITLE \_\_\_\_\_

SIGNATURE \_\_\_\_\_

I HEREBY CERTIFY THAT THE ABOVE DESCRIBED SYSTEM HAS BEEN TESTED AS  
INDICATED ABOVE AND FOUND TO BE ENTIRELY SATISFACTORY AS REQUIRED IN  
THE CONTRACT SPECIFICATIONS.

SIGNATURE OF INSPECTOR \_\_\_\_\_

DATE \_\_\_\_\_

REMARKS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Piping Systems Test Page 1



CONTRACTOR'S INSPECTOR ROOFING CHECK LIST AND TEST REPORT  
(For each day of roofing operations)

Date\_\_\_\_\_ Weather\_\_\_\_\_

Contract No. \_\_\_\_\_

All data required to be taken from labels on container:

1. Type of bitumen used with underlayment or insulation and area covered \_\_\_\_\_

2. Type of bitumen used with base sheet and area covered \_\_\_\_\_

3. Type of bitumen used for mopping 4-ply \_\_\_\_\_

4. Type of bitumen used for flood coat or surfacing gravel \_\_\_\_\_

5. Type of thickness of insulation or underlayment used \_\_\_\_\_

6. Type of base sheet used \_\_\_\_\_

7. Type of felt used \_\_\_\_\_

8. Source of surface gravel and condition, wet, dry, clean \_\_\_\_\_

9. Roofing sample(s), location and weight \_\_\_\_\_

10. Bitumen sample furnished to the Government, quantity and type \_\_\_\_\_

11. Bitumen temperature checks, type of asphalt, time taken, maximum  
temperature specified \_\_\_\_\_

12. Are brooms being used? Yes \_\_\_\_\_ No \_\_\_\_\_

13. Bituminous cement used, type and usage \_\_\_\_\_

14. Area covered \_\_\_\_\_

\_\_\_\_\_  
Contractor's Approved Authorized  
Representative

\_\_\_\_\_  
Quality Control Inspector

Roofing Checklist Page 1



## OPERATION AND MAINTENANCE INSTRUCTIONS

CONTRACT NO. \_\_\_\_\_

DESCRIPTION\_\_\_\_\_

LOCATION \_\_\_\_\_

DATE \_\_\_\_\_

Operation and maintenance instructions were conducted for \_\_\_\_\_  
(Type of Equipment)

\_\_\_\_\_ required by section\_\_\_\_\_, paragraph\_\_\_\_\_

on \_\_\_\_\_.  
(Date)

The following personnel were present:

[illegible]

Instructions were given by \_\_\_\_\_  
(Contractor's Representative)

The personnel identified herein by their signatures certify that they have been instructed in the operation and maintenance of the above-mentioned equipment.

O&amp;M Page 1

-- End of Section --

SECTION 01520

GOVERNMENT FIELD OFFICE  
**Amend #0001**

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

FEDERAL SPECIFICATIONS (FS)

FS BB-F-1421B                      Fluorocarbon Refrigerants

ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA (IESNA)

IESNA RP-1                      (1993) Office Lighting

1.2 SUBMITTALS

Government approval is required for submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 Data

Government Field Office; GA.

Provide manufacturer catalog data, specifications, and shop drawings for approval, verifying all dimensions, fixtures and equipment. Note all deviations on drawings.

PART 2 PRODUCTS

2.1 GOVERNMENT FIELD OFFICE

The Contractor shall furnish and set up complete, including tie-downs and connection to existing utilities, ready to use at the project site and in a location designated by the Contracting Officer, an office for use by the Government during the life of the contract. The project office shall be a relocatable modular building or trailer, be weatherproof, have a minimum floor size of 4,270 mm by 12,200 mm, have two offices, common area, conference room, toilet facilities, and sufficient number of adjustable windows for each room for adequate light and ventilation, and a battery-operated smoke detector alarm for each room. The offices and conference room shall have separate entry doors and interior doors to the common area. Equip with hot water heater, overhead lighting in accordance

with IESNA RP-1 standards, and have adequate air conditioning, heating, and potable water supply. The walls and ceiling of the project office shall be insulated and the interior and exterior walls shall be of a prefinished material. The building shall be constructed of wood, metal or other acceptable construction materials and shall be designed in accordance with the Uniform Building Code. The windows and doors shall be screened and the doors provided with dead bolt type locking devices or a padlock and heavy-duty hasp bolted to the door. Exterior door hinge pins shall be non-removable. The windows shall be operable and be securely fastened from the inside. Bars or heavy mesh screens to prevent easy access to the building through these panels shall protect Glass panels in windows. All windows will be provided with mini-blinds. In warm weather, air conditioning capable of maintaining the office at 50 percent relative humidity and a room temperature 11 degrees C below the outside temperature when the outside temperature is 35 degrees C, shall be furnished. If window-style air conditioner(s) is used, the refrigerant shall be one of the fluorocarbon gases that is in accordance with FS BB-F-1421 and has an Ozone Depletion Potential (ODP) of less than or equal to 0.05. Equip the office with the following:

Conference Room:

- conference table with minimum 8 chairs
- lockable supply locker for office supplies
- bookcase (minimum 1,524 mm tall, 813 mm wide and 380 mm deep)
- marker board (915 mm by 1,830 mm)
- plans table (1,220 mm by 760 mm work area - minimum)
- water fountain with cooler
- refrigerator (.28 cubic meter)
- main entrance door should have a covered entrance (minimum 1830-mm by 1830 mm)
- 2 each telephone voice data outlets

Each Office:

- desk with three drawers and middle drawer (1,220 mm by 760 mm work area - minimum)
- height adjustable swivel chair
- stool for plans table
- plans rack for full size plans
- 3-drawer lockable file cabinet
- small bookcase (approximately 1,016 mm tall, 760 mm wide and deep)
- bulletin board or marker board (approximately 915 mm by 760 mm)
- telephone voice data outlet

2.1.1 Manufacturer

Manufacturer shall be regularly engaged in the construction and on-site erection of relocatable modular buildings or trailers.

2.1.2 Utilities

Exterior utilities shall be permanently installed to the modular unit and connected with existing utilities. Exposed utilities shall be insulated to prevent freezing. Utilities shall be connected and disconnected in accordance with local codes and to the satisfaction of the Contracting Officer. Contractor shall be responsible for the cost of all utilities to

include telephone. The Contractor will provide two telephone lines and at least two each two-line telephone equipment and service to the Government Field Office.

#### 2.1.3 Vehicular Access and Parking

The Contractor shall provide improved access road and parking area for five vehicles adjacent to the Government Field Office.

### PART 3 EXECUTION

#### 3.1 ERECTION

Erect the building in accordance with building manufacturer's written recommendations at a location designated by the Contracting Officer. Securely anchor trailer(s) to the ground at all four corners to guard against movement during high winds. Water and weather proof the unit and make ready for use within 30 days after Contract Notice to Proceed.

#### 3.2 MAINTENANCE AND REPAIR

The Contractor shall be responsible for maintenance and repair of the office during the life of the contract.

#### 3.3 RELOCATION

The Contractor shall be responsible for relocating the Government Field Office should it be required to accommodate the sequence of construction. The relocation will be at no expense to the Government.

#### 3.4 OWNERSHIP AND DISPOSITION

The office, including all furniture and equipment, shall remain the property of the Contractor at completion of the construction. The Contractor shall remove the unit and all associated equipment and utilities after the Government vacates the office.

-- End of Section --

SECTION 13805

ONE-WAY FREQUENCY MODULATION (FM) UTILITY MANAGEMENT & CONTROL SYSTEM  
(UMCS)DIGITAL CONTROL UNIT

**03/2000**

**AMENDMENT NO. 0001**

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 70 (1996) National Electrical Code.

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)

NEMA TC 2 (1983) Electrical Plastic Tubing  
(EPT) and Conduit (EPC40 and EPC-80)

NEMA TC 3 (1982) PVC Fittings for Use with  
Rigid PVC

NEMA TC 13 (1986) Electrical Nonmetallic  
Tubing (ENT)

UNDERWRITERS LABORATORIES INC (UL)

UL 1 (Aug. 26, 1985 8th Ed.) Flexible  
Metal Conduit.

UL 5 (May 28, 1985, 10th Ed.) Surface  
Metal Raceways and Fittings.

UL 6 (Oct. 23, 1981, 9th Ed.; Rev. Oct.  
10,1983; Errata Aug. 29, 1986) Rigid Metal  
Conduit

UL 83 (Sep. 26,1983 9th Ed.; Rev. thru Feb. 22,  
1989) Thertnoplactic Insulated Wires and  
Cables.

UL 360 (Aug. 18, 1986, 3rd Ed.) Liquid Tight  
Flexible Steel Conduit.

UL 486A (1997) Wire Connectors and Soldering Lugs  
for Use with Copper Conductors

UL 486B	(1997; Rev Jun 1997) Wire Connectors for Use with Aluminum Conductors
UL 486C	(1997) Splicing Wire Connectors
UL 512	(Feb. 16, 1987, 9th Ed.) Fuseholders.
UL 651	(May 8, 1981, 4th Ed.; Rev. thru May 2, 1988) Schedule 40 ,and`80 Rigid PVC Conduit
UL 651A	(May 11, 1981, 1st Ed.; Rev. thru May 3, 1988) Type EB and A Rigid PVC Conduit and HDPE Conduit
UL 797	(1993; Rev thru Mar 1997) Electrical Metallic Tubing
UL 1585	(1986) UL Standard For Safety CLASS 2 and CLASS 3 Transformers Second Edition 28 DEC 1990

## 1.2 GENERAL REQUIREMENTS

The Contractor shall provide and install new microprocessor based Digital Control Units (DCUs) at locations shown on the plans. Each new DCU shall include internal power supply transformer rated at 120/240 volts primary with fuse. Contractor shall provide and install all associated electrical wiring, control relay wiring, rigid metal, flexible metal or liquid-tight flexible metal conduit and appurtenances.

## 1.3 SUBMITTALS

Government approval is required for submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 Data

Manufacturer's Descriptive Data; GA.

Manufacturer's Descriptive Data (4 copies) shall identify the model of Digital Control Unit to be provided. The optional accessories required by this specification, such as internal power supply transformer, test and contact position LEDs, and normally closed control relay type, shall be identified. Manufacturer's Descriptive Data shall include technical information to show compliance with specifications, such as the contact rating of control relay. Manufacturer's instructions for the installation, operation, and maintenance of the new Digital Control Unit shall be submitted also.

The Contractor shall not order any materials until submittal has been approved by the Contracting Officer. Contractor shall make submittal early, as manufacturer's lead time will be 2 to 3 months for assembly and delivery.

## PART 2 PRODUCTS

### 2.1 MATERIALS

All materials shall be new. Materials shall conform to the respective publications. The new Digital Control Unit shall be the standard catalogued product of a manufacturer who has produced the product for a minimum of two years.

### 2.2 DIGITAL CONTROL UNIT (DCU)

#### 2.2.1 General

A Digital Control Unit shall consist of a microprocessor based printed circuit board, internal power supply and a control relay. These components are factory assembled into a single weatherproof enclosure of not more than 1500-cubic-inch exterior volume. It shall be cataloged by the manufacturer for continuous duty under the following conditions. Ambient dry bulb temperatures at Fort Hood range from minus 18 to plus 40 degrees Celsius. Relative humidity ranges from 0 to 100 percent. The DCU shall be of a design which permits installation on exterior walls or on chiller/condensing unit disconnect switches. They shall be rated to perform under conditions of constant vibration and severe weather conditions and to perform without degradation of service in any manner. The maximum energy demand for a DCU with transformer shall not exceed 10 Volt-Amperes.

#### 2.2.2 Weatherproof Enclosure

The weatherproof enclosure constructed of a polycarbonate material with door gasket and mounting hardware shall meet NEMA III and NEMA IV raintight criteria. A sealed viewing window on each enclosure's door shall correspond with the Contact Position and Test LEDs location. An integral 19 mm (3/4-inch) threaded nipple shall provide a weatherproof interface with associated exterior conduit or enclosure. The hinged door with latch shall have a provision for a utility meter seal.

#### 2.2.3 Power Supply Transformer

Power supply transformer shall be securely mounted inside of the DCU's housing and shall provide the secondary voltage required by the microprocessor based printed circuit board. The Maximum VA rating of the transformer must meet the requirements of the FM radio circuit board. Unless otherwise noted on plans or in specifications, the primary voltage to be used is 120/240 VAC, 60 Hz. (Note: a 480/277 VAC transformer is available). Power supply transformer shall be Class 2, UL approved. It shall be the split bobbin wound coil type utilizing approved materials to meet UL 1585. Power supply transformer shall operate without interference

to DCU operation under conditions specified in paragraph General. The power supply transformer shall include fuse protection. The accompanying fuse shall be rated to blow when transformer's current draw exceeds 10 percent of maximum VA rating. It shall be installed on the Hot primary conductor of the transformer in a suitable in-line fuseholder UL 512.

#### 2.2.4 Digital Control Unit Operation Specifications

##### 2.2.4.1 Addresses

Each Digital Control Unit shall be programmable to any one of 4096 remotely programmable addresses. Each DCU shall also have a fixed address which is specifically assigned by the manufacturer to Fort Hood, Texas. Total possible number of fixed addresses shall be 4,000,000. The DCU shall utilize the Scientific Atlanta (SA) SA-205 code transmission format.

##### 2.2.4.2 Frequency Modulation (FM) Receiver

The Frequency Modulation (FM) receiver shall be the narrow band, dual conversion, crystal controlled type with an integral antenna and shall operate for the Fort Hood carrier frequency: 139.650 MHz. The minimum allowable frequency deviation shall be +/- 1.0 KHz. Selectivity shall be at least 50 dB down from carrier reference at plus or minus 30 KHz. The frequency stability shall be +/- .002 percent for ambient temperatures of -30 degrees to +60 degrees Celsius. Image rejection shall be at least 40 dB. The receiver shall have a sensitivity of 20 microvolts per meter or less.

##### 2.2.4.3 Digital Control Unit

The Digital Control Unit shall decode the baseband signal from the received 139.650 MHz FM carrier. The DCU shall utilize "distributed intelligence" and shall be capable of providing control for a minimum of 8 hours upon the receipt of a single radio command. The DCU shall also utilize a linear control algorithm which will provide a randomly selected start and stop times to ensure smooth transition into as well as out of control. The DCU shall be a two function controller with the capability of remote programmable cold load pickup. [AM#0001] \_\_\_\_\_. DCUs shall have sufficient memory to record programmed parameters and operation. The unit shall have the capability of dumping this recorded data to a portable retrieval device. The DCU shall incorporate a 7.5 minute plus or minus 1.5 minute timer and restore the controlled service when the time out period has elapsed and another signal is not received.

##### 2.2.4.4 Control Relay

Control relay shall be rated for the load that it is shown to control on plans. Three types of relays are available: 1) 600VAC, 10 Amp DPDT relay, 2) 1 HP, 300VAC, 25 Amp relay or 3) I/IOHP, 120 VAC, 5 Amp relay. Existing relay manufacturers and model numbers are as follows:

- (a) Deltrol Controls, Model # 275F102C12D, rating: 17-FLA, 60-IRA, 300-VAC, 25-Amp @ 28VDC / 300VAC, 10-Amp @ 600VAC, 1-HP @ 120VAC, 1-1/2HP @ 240VAC, DPDT relay, mounted off of the printed circuit board.

(b) Aromat, Model JAlb-TM-DC12V-P, AR66317398, 1-HP @ 125VAC, 250VAC, 25-Amp @ 250VAC, SPST relay, mounted off of the printed circuit board.

(c) Omron, Model G5L-114P-PS, 12VDC coil, contacts: 5-Amp, 250VAC, 5-Amp, 30VDC, SPDT relay mounted on the printed circuit board.

Relay life shall be at least 300,000 operations at the rated load. When the DCU's address or the SCRAM code is broadcast, the control relay shall be energized to open its contacts and thus interrupt the continuity of a device's control circuit. If there is no power to the board (e.g., utility outage), the control relay shall return to its normally closed position. The DCU shall include two light-emitting diodes (LEDs) which will emit light through a transparent lens of the DCU's weatherproof housing whenever the control relay is open (i.e., activated) or a test signal is received. The reference models are: DCU - 2051B-00-04-S for a 5-Amp single function on-board relay and 2052B-03-04-S for two 5-Amp on-board relays, DCU - 2051B-43-04-S for a 25-Amp DPDT off-board relay and DCU - 2051B-01-04-S for a 30-Amp off-board relay, [AM#0001] DCU - 2052B-02-04-S for a 5-Amp on-board and 30-Amp off-board relays. [AM#0001] \_\_\_\_\_.

#### 2.2.5 Source Of Supply

Comverge Technologies  
2825 Breckenridge Blvd.  
Suite 170B  
Duluth, GA 30096  
(770) 696-7660 Ext. #214  
FAX: (770) 696-7666  
POC: Mr. Jim Stovall

Contractor shall be responsible for conveying all pertinent information to prospective suppliers. Fort Hood's unique FM carrier frequency, the power supply and control relay requirements, and any requirement for one Digital Control Unit to control more than one load, etc., shall be identified to the supplier.

#### 2.3 CONDUCTORS AND CONDUIT

##### 2.3.1 Thermoplastic-Insulated Wires and Cables

UL 83

##### 2.3.2 Connectors, Wire Pressure

For Use With Copper Conductors: UL 486A and UL 486C.

For Use With Aluminum Conductors: UL 486B and UL 486C.

##### 2.3.3 Zinc-Coated Rigid Steel Conduit

UL 797 or UL 6

##### 2.3.4 Flexible Steel Conduit

General purpose type: UL 1

Liquid-tight: UL 360.

#### 2.3.5 Metal Raceways and Fittings

UL 5

#### 2.3.6 Nonmetallic Raceways and Fittings

NEMA TC 2; NEMA TC 3; NEMA TC 13; UL 651; UL 651A

### PART 3 EXECUTION

#### 3.1 GENERAL REQUIREMENTS

Work shall be performed by experienced electricians in accordance with NFPA 70. Exposed electrical wiring shall at no time be left unattended.

#### 3.2 INSTALLATION

Digital Control Units shall be installed as shown on plans and in accordance with specifications and manufacturer's instructions as identified in the approved submittal. DCUs shall be installed in the vertical position with the 19 mm (3/4-inch) threaded nipple on the bottom side. Wiring of the DCU's relay shall be done in such a manner that it only interrupts control voltage to the [AM#0001] chiller, condensing unit or heat pump unit.

#### 3.3 WIRING METHODS

##### 3.3.1 General Requirements

Unless otherwise indicated, wiring shall consist of insulated conductors installed in rigid metal, flexible metal, liquid-tight flexible metal or nonmetallic conduit. Conductors shall be installed in suitable 4.5 mm (3/8-inch), 13 mm (1/2-inch) or 19 mm (3/4-inch) conduit. Conduit shall be sized in accordance with NFPA 70. The DCU's control relay shall be connected in such a manner that it interrupts only the equipment control circuit.

##### 3.3.2 Wire Sizes

Transformer primary conductors shall not be smaller than No. 16 AWG. Class 2 remote control and signal circuit conductors shall not be less than No. 18 AWG. All other control circuit wiring shall be sized in accordance with NFPA 70.

#### 3.4 TESTING OF DIGITAL CONTROL UNITS

Digital Control Units shall have fixed addresses (serial numbers) assigned at the factory and remain uncoded until installation is ready for inspection by Contracting Officer's Representative. The Contractor shall

supply fixed addresses and associated building numbers to the DPW, Energy Management Team through the contracting officer's representative. At that time, the programmable address will be assigned [AM#0001] via use of FM Load Management Programming feature. The DCU shall be tested with a Government-owned and -operated transmitter or a Portable Test Unit (PTU). The Ft. Hood DPW shall witness the final testing of the DCU's. Upon satisfactory testing of the DCU, a utility seal will be installed on the unit by the Contractor.

-- End of Section --

SECTION 13815

AUTOMATED METER READING SYSTEM

04/2000

AMENDMENT NO. 0001

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI B109.2	(1992) Diaphragm Type Gas Displacement Meters(500 Cubic Feet per Hour Capacity and Over)
ANSI C12.4	(1984; R 1996) Mechanical Demand Registers
ANSI C12.10	(1987) Electromechanical Watthour Meters

AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME)

ASME B31.8	(1995) Gas Transmission and Distribution Piping Systems
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AMERICAN WATER WORKS ASSOCIATION (AWWA)

AWWA ANSI/AWWA C700	(1995) Cold-Water Meters - Displacement Type, Bronze Main Case
AWWA ANSI/AWWA C707	(1982; R 1992) Encoder-Type Remote-Registration Systems for Cold-Water Meters

1.2 SUBMITTALS

Government approval is required for submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-06 Instructions

Installation; FIO.

The manufacturer's recommendations for each material or procedure to be utilized.

## PART 2 PRODUCTS

### 2.1 GENERAL

Meter reading at Fort Hood is performed via telephone lines to a central computer. Specified meters and electronic interface units provided under this contract shall be compatible with the existing Teldata Inc. system. The drawings shall depict the location of each meter. Contractor shall supply all necessary labor and materials to provide a fully functional system. Item submitted shall have been a standard manufactured product for at least two years.

### 2.2 METER INTERFACE UNIT (MIU)

#### 2.2.1 General

A dial in-bound type Meter Interface Unit (MIU) shall be installed where shown or directed, to record pulses or encoded signals from each electric, gas and water meter. The MIU shall be factory mounted in a NEMA type 1 or NEMA type 3R for indoor or outdoor installation, respectively. The MIU shall be a Teldata Inc., [AM#0001] Model DC-4 or IE-4 with appropriate number of PB-01 boards. Where length of conductor from the meter to MIU exceeds 500 feet, additional MIU's shall be provided as necessary.

#### 2.2.2 MIU Connections

The data cable shall be routed from each meter to the MIU through appropriate sized conduit. Approximately 1-2 feet of cable shall be provided at both ends for final connection. The final connection shall be in accordance with paragraph 3.5, TESTING.

#### 2.2.3 Meter Retrofit Kits

Pointer type electric and gas meters may be retrofitted with a RioTronics retrofit kit capable of providing the required pulse output to the MIU. Retrofit kit shall generate 10 pulses per revolution of the associated pointer (normally the least significant dial). Gas meters of sizes 750 class and large will require a MC816 index cover

### 2.3 WATER METERS

Meters shall be the type and size shown on the drawings or specified. Registers shall be an encoder type remote register designed in accordance with AWWA ANSI/AWWA C707. The communications register shall be enclosed in a waterproof glass lens with potted terminals designed for flooded pit installation. Meters shall include a 1220 mm (4-foot) 3-conductor, 22 AWG (minimum) shielded output cable. Registers shall be compatible with the Meter Interface Unit (MIU).

#### 2.3.1 Displacement Type

Displacement type meters shall conform to AWWA ANSI/AWWA C700. Registers shall be straight-reading and shall read in U.S. gallons. Meters in sizes 13 mm to 25 mm (1/2 through 1 inch) shall be frost-protection design.

Connections shall be suitable to the type of pipe and conditions encountered.

#### 2.4 METER BOXES

Meter boxes shall be of cast iron, concrete, or plastic. The boxes shall be of sufficient size to completely enclose the meter and shutoff valve or service stop and terminal box for wire transmitter connection. Meter boxes set in paved areas subject to vehicular traffic shall be cast iron, or concrete with cast iron lid and cast iron meter reader lid. Boxes set in sidewalks, not subject to vehicular traffic, shall be concrete with cast iron lid and cast iron meter reader lid. Plastic boxes and lids shall be used in unpaved areas or grass areas not subject to vehicular traffic. Box height shall extend from invert of the meter to final grade at the meter location. The lid shall have the word "WATER" cast in it.

#### 2.5 GAS METERS

Meters shall conform to ANSI B109.2. Meters shall be pipe or pedestal mounted and be provided with a strainer immediately upstream. Meters shall be provided with over-pressure protection as specified in ASME B31.8. Meters shall be suitable for accurately measuring and handling gas at pressures, temperatures, and flow rates indicated. Meters shall have an encoded register. Encoded registers shall include an electronics communication package to deliver a compatible encoded signal via a 3-conductor, 22-AWG AMRS output cable to the Meter Interface Unit. The communication register shall be enclosed in a waterproof glass lens with potted terminals. Otherwise, a pulse switch initiator capable of operating up to speeds of 500 pulses per minute with no false pulses and shall require no field adjustments. Meter registers shall be the clock pointer type. Initiators shall provide the maximum number of pulses up to 500 per minute that is obtainable from the manufacturer. It shall provide not less than one pulse per 2.8 cubic meters (100 cubic feet) of gas. When required, a non-pulse type meter may be used when retrofitted with a meter retrofit kit as described in paragraph 2.2.3, Meter Retrofit Kits.

#### 2.6 ELECTRIC METERING, KWH AND DEMAND

Watt-hour meters shall have an encoded register, when available for selected meter type, and shall be compatible with the existing automated meter reading system. Encoded type register shall have a 3-wire output cable. Otherwise, a pulse type meter shall be used. Meter shall be electromechanical type conforming to ANSI C12.10. Watt-hour meter shall also have a 15-minute, cumulative form, demand register conforming to ANSI C12.4 and provided with not less than 2-1/2 statvars for polyphase meters. Watt-hour meters shall be an encoded type compatible with the existing automated meter reading system, electromechanical type conforming to ANSI C12.10 and Pulse type meters shall be equipped with an electronic pulse initiator, or an electronic type meter with pulse output. Pulse type meters shall be capable of operating at speeds up to 500 pulses per minute with no false pulses and shall provide a pulse output of one pulse per kilowatt-hour. Any programming device or software required for programming shall be supplied with the meter. When required, a non-pulse type meter may be used when retrofitted with a meter retrofit kit as described herein.

Meter pulse output and connections shall be compatible with the meter interface unit.

## 2.7 WIRE AND CABLE

Wiring methods shall conform to SECTION 16415, ELECTRICAL WORK, INTERIOR. Wiring installed underground shall be in accordance with wiring methods specified by SECTION 16375, ELECTRICAL DISTRIBUTION SYSTEM, UNDERGROUND.

### 2.7.1 Meter Interface Unit to Meter Register Wiring

Wiring shall be No. 22 AWG minimum solid copper with 600-volt insulation, twisted and shield, 3-wire to match MIU hardware. The color code shall be red, green and black. Multiple conductor wiring shall have an outer jacket of PVC. Connections of leads from registers shall be made in waterproof type terminal boxes, when installed below grade. Connections made above grade and exterior to the building shall be weatherproof type.

### 2.7.2 Meter Interface Unit to Telephone Block

Wiring shall be No. 22 AWG minimum solid copper with 600-volt insulation, twisted and shield, 2-wire to match MIU hardware. The color code shall be red and black or red and green. The phone cable shall be routed from the MIU to the nearest telephone terminal block. Where possible, a dedicated phone line shall be designated. Connections of leads from registers shall be made in waterproof type terminal boxes, when installed below grade. Connections made above grade and exterior to the building shall be weatherproof type.

## 2.8 SOURCES OF SUPPLY

The following sources of supply is only to provide possible sources that have been proven to be compatible with the Fort Hood's Automatic Metering System (AMR). This list of sources is not intended to preclude the use of other suppliers.

### 2.8.1 Water Meters

a. ABB Kent Meters: ACT Pipe and Supply  
1400 Grand Ave Parkway  
Pflugerville, Tx. 78660  
(800) 221-5166  
(512) 252-7026 (Fax)

b. Sensus Meters: The Rohan Co.,  
4333 Irving Blvd  
P. O. Box 569250  
Dallas, Tx 75356  
(800) 252-1557

### 2.8.2 Gas Meters

a. American Gas Meter: Carl Poe Co., Inc.  
Reinerman St.

Houston, Tx 77007  
(713) 861-3816.

b. Equimeter gas meters: McGuiness Industrial Sales  
3935 Hartdale  
Houston, Tx 77063  
(713)-974-6400.

#### 2.8.3 Electric Meters

a. Landis & Staefa: Cummins Utility Supply  
7144 Burns St.  
Fort Worth, Tx 76118  
(800) 776-0491

b. ABB Power: ABB Power  
1702 Old Minters Chapel Rd  
Grapevine, Tx 76051  
(800) 469-1406

3.3 General Electric: Texas Metering and Device Co  
Box 3088  
Waco, TX 76707  
(800) 247-5116

c. Schlumberger: Priester-Mell & Nicholson  
1016 W. Larissa  
Jacksonville, TX 75766  
(800) 765-7666

#### 2.8.4 Retrofit Kits

a. RioTronics: Riotronics  
Corps, 6841 Yosemite, Unit 100  
Englewood CO 80112  
(303) 773-2600

### PART 3 EXECUTION

#### 3.1 METER INTERFACE UNIT

Meter Interface Units shall be located where indicated with mounting and connections made in accordance with manufacturer recommendations.

#### 3.2 GAS METERS

##### 3.2.1 Connections To Existing Lines

Connections between new work and existing gas lines, where required, shall be made in accordance with ASME B31.8, using proper fittings to suit the actual conditions. When connections are made by tapping into a gas main, the connecting fittings shall be the same size as the pipe being connected.

Gas meters and associated hardware shall be installed in accordance to manufacturer's recommendation or as shown on plan.

### 3.3 WATER METERS

#### 3.3.1 Location of Meters

Meters and meter boxes shall be installed at the locations shown on the drawings. Meters shall be installed in accordance with manufacturer's recommendations or as shown on plans.

#### 3.3.2 Setting of Meters and Boxes

The meters shall be centered in the boxes to allow for reading and ease of removal or maintenance. Earth fill shall be tamped around each valve box or pit to a distance of 1.2 meters (4 feet) on all sides of the box, or the undisturbed trench face if less than 1.2 meters (4 feet).

### 3.4 ELECTRICAL WORK

Wiring methods shall conform to SECTION 16415, ELECTRICAL WORK, INTERIOR. Wiring installed underground shall be in accordance with wiring methods specified by SECTION 16375, ELECTRICAL DISTRIBUTION SYSTEM, UNDERGROUND.

### 3.5 TESTING

The contractor shall insure that all wiring is continuous and properly labeled from meter to MIU prior to making any final connections. Upon completion of continuity testing and labeling, the contractor shall provide a 5 day notice to the contracting officer representative to coordinate with Ft. Hood personnel, who will verify readings and registers, make final wiring connections and program the MIU(s). Ft. Hood personnel and the contractor shall verify meter readings sent to the central computer to insure the system is responding and data sent is consistent with the meter registers.

-- End of Section --